THE EXPENDABLE LAUNCH VEHICLE COMMERCIALIZATION ACT

HEARINGS

BEFORE THE

SUBCOMMITTEE ON
SPACE SCIENCE AND APPLICATIONS

OF THE

COMMITTEE ON SCIENCE AND TECHNOLOGY U.S. HOUSE OF REPRESENTATIVES

NINETY-EIGHTH CONGRESS

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THE EXPENDABLE LAUNCH VEHICLE COMMERCIALIZATION ACT

FRIDAY, NOVEMBER 18, 1983

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE AND TECHNOLOGY,
SUBCOMMITTEE ON SPACE SCIENCE AND APPLICATIONS,
Washington, D.C.

The subcommittee met, pursuant to call, at 11:15 a.m., in room 2318, Rayburn House Office Building, Hon. Harold L. Volkmer (chairman of the subcommittee) presiding.

Mr. VOLKMER. The subcommittee will come to order.

Today, the subcommittee convenes this hearing to receive testimony on H.R. 3942, the Expendable Launch Vehicle Commercialization Act.

Although there has been some interest in marking up this bill before the end of the session, I believe that it would be wise to wait until the Congress reconvenes in January to complete markup on the bill. There are still some outstanding issues to be worked out that simply cannot be dispensed with in the short time we have available to us.

It is my hope that today's hearing will provide substantive information that will help us resolve some of these issues and, if necessary, make intelligent and appropriate changes to the bill.

Commercialization of launch services in outer space is a goal that I share with this administration. H.R. 3942 is consistent with this goal. This bill is intended to promote and control, in a responsible yet minimal way, private sector involvement in launching space objects with a single agency in the executive branch overseeing and facilitating such activities.

The issue of which agency should serve as the lead agency for commercial ELV activities has received much attention over the past several months. Just this last Wednesday, the White House recommended that the Department of Transportation assume this role.

Here with us today to discuss this matter and to present the administration's views on the bill is the Secretary of Transportation, Elizabeth Dole. Secretary Dole, on behalf of the committee, let me welcome you here today. I look forward to your testimony with great interest.

Before we proceed, however, I would like to turn to the Ranking Minority Member of the Subcommittee, Congressman Manuel Lujan, for any opening remarks he may wish to make.

Mr. LUJAN. Thank you, Mr. Chairman.

Welcome, Madam Secretary. I first want to congratulate Secretary Dole and, of course, the administration on making the decision as to who would be the lead agency for the commercial launch vehicles.

I have been impressed over a period of time of the enthusiasm that—with the enthusiasm you have shown for being the lead agency. And I am sure with that kind of enthusiasm we will move on forward.

And although the Department of Commerce may be disappointed that they were not selected as the lead agency by the administration, I believe there is still room for the Department of Transportation and the Department of Commerce both to play a role. I expect that the Department of Commerce would continue to serve an important function in the promotional role.

It is anticipated that the President may soon be announcing his support for the space station initiative. This offers the Department of Commerce an excellent opportunity to provide the leadership role in the general area of commercial uses of space. They certainly should be the agency that would be doing that—the promotional part of it along with NASA and the regulatory portions of the Department of Transportation.

However, if we are going to see space developed commercially, a key step is to insure the provision of cheap, reliable transportation. And NASA has done an outstanding job of developing the technologies for space transportation—the shuttle and, of course, the expendable launch vehicles.

Recently, NASA has taken an appropriate step of turning over the ELV capability to the private sector.

In addition, the private sector has shown their traditional initiative in continuing to develop more space transportation technologies. Certainly the Department of Transportation's new responsibilities as lead agency should cover all commercial launch vehicles, including the possibility that the private sector will develop launch vehicles that are not expendable, such as those that are currently being proposed.

So, again, Madam Secretary, let me welcome you today to this hearing. And I want to thank you for this opportunity, Mr. Chairman.

Mr. VOLKMER. Thank you, the gentleman from New Mexico.

Secretary Dole, I wish to again welcome you to your, as I know, first appearance before the subcommittee, and I am sure there will be others in the future. And your statement, which you've been so kind to forward to us, will be made a part of the record. You may review the statement in full or summarize it, however you so desire.

STATEMENT OF HON. ELIZABETH H. DOLE, SECRETARY OF TRANSPORTATION, ACCOMPANIED BY JEFFREY N. SHANE, DEPUTY ASSISTANT SECRETARY FOR POLICY AND INTERNATIONAL AFFAIRS, AND JENNA DORN, SPECIAL ASSISTANT TO THE SECRETARY

Secretary DOLE. Thank you, Mr. Chairman.

I would like to present my statement. I am certainly pleased to appear before you today to discuss H.R. 3942 and the administration's plans to focus our resources and effort on commercialization of expendable launch vehicles.

Mr. Chairman, we are here to discuss America's newest transportation industry—the industry that will boost payloads into space and enable mankind to exploit its newest frontier.

My colleagues and I in the Department of Transportation are gratified that the President has designated the Department of Transportation as the lead agency for this very important endeavor.

The President's designation of a lead agency affirms our view that the public will benefit most from a climate that frees the industry from needless regulatory barriers and allows it to develop, consistent with public safety, environmental, and national security concerns.

Some seeking to enter the satellite launch business have been reluctant to make substantial investments because the regulatory and approval process is so cumbersome. I believe that DOT is in the best position to ease that concern.

I view this new responsibility as an opportunity and a challenge. We can help launch an entire new U.S. industry—one with potentials as unlimited as space itself. We are already at work on plans to consolidate and simplify the regulatory process for space transportation using expendable launch vehicles.

And we look forward to working closely with the Congress, especially the members of this subcommittee, and the interested agencies as we proceed.

We have already received welcome expressions of support from our friends at the Commerce Department, from NASA, and other agencies.

Commerce's promotional capability, and NASA's extensive experience with the private ELV industry will be particularly valuable as we work jointly to foster the achievement of the full potential of this industry. Obviously, it is an industry with a multibillion dollar future.

Mr. Chairman, the market clearly exists for commercialization, and our common goal is to assure that the Government clears the way for true success.

On May 16, as you have indicated, the President—or I'm sorry, this is the time that the President signed a National Security Decision Directive, May 16, 1983. At that time, he stated that the policy of the U.S. Government is to encourage and facilitate commercialization of expendable launch vehicles.

The NSDD also established a Working Group on Commercial Launch Operations under the Senior Interagency Group for Space, cochaired by the Department of State and NASA. The working group was directed to address a number of items, and I will skip those because I think you are familiar with what they were asked to address, and the fact that, of course, just two days ago the President designated DOT as the lead agency.

I would like to share with you and other members of the subcommittee our approach on how to deal with this exciting new transportation industry. The Department intends to work closely, as I

have said, with the private sector and with other interested Federal agencies to streamline, to coordinate, and to expedite the various regulatory processes governing commercial launches using ELV's.

We believe that an efficient lean mechanism will provide a suitable climate for the growth and development of this industry. Most of the fundamental issues involved in launching the commercialization of ELV's will be similar to those which occurred during the early stages of other transportation modes. And I think this provides another reason why DOT can be especially helpful at this point in time.

We are in a position to deal effectively with these issues because of our extensive experience in the deregulation of the aviation, rail, trucking, and bus industries, and in insuring increased competition within and among the transportation industries.

Further, three of the Department's operating administrations will have important roles to play in launch and range approvals.

The FAA will continue to exercise its current responsibilities regarding the Nation's air space and will oversee future commercial launch ranges.

The Coast Guard will insure that launches do not adversely affect the safety of the United States and international shipping lanes. And the Materials Transportation Bureau will oversee the transportation of hazardous materials, such as fuels for ELV's, to launch sites.

The Department will make extensive use of its long history of interactions with the aerospace industry in carrying out the President's mandate. We will also draw upon our advanced technological expertise in aviation, aerospace, civil, and industrial engineering.

I believe that this function is so significant that it should be assigned to the Department's Office of the Secretary. With its experience in policy development, program coordination, and regulatory reform, OST will be able to orchestrate the streamlining of the launch and range approval processes.

The Department will provide the industry with a single point of contact within the Government regarding launches of commercial ELV's from commercial ranges.

We will also encourage, facilitate, and expedite approvals of launch applications, and insure that each agency requires only essential information from applicants, and we will encourage each agency to reduce its processing time to an effective minimum.

The Department has not yet reached a decision on whether there is a need for legislation in support of our lead agency activities. We plan to proceed immediately, along the lines suggested above, to implement the President's mandate. And we are working in cooperation with the other involved agencies to draft an Executive order to spell out in somewhat greater detail our functions and those of other involved agencies.

I would like to summarize now the Department of Transportation's position on H.R. 3942. In general, we strongly and enthusiastically support efforts to encourage and facilitate the commercialization of expendable launch vehicles.

It is clear that H.R. 3942 was drafted precisely in order to futher that important objective. We believe, however, that despite its commendable purpose, H.R. 3942 could have counterproductive effects.

It will not be surprising, of course, that we agree that designation of an effective lead agency is critical. But it is preferable that each of the agencies with technical expertise and regulatory authority related to approvals of commercial launch ranges and operations be permitted to retain that authority.

Further, we believe that, as it now stands, H.R. 3942 is too prescriptive and detailed. Let me just elaborate on that for a moment.

Implementation of a coherent Federal policy can be achieved most effectively through determined coordination of the activities of the agencies involved. Centralization of all functions in a single agency, the approach taken in H.R. 3942, might well impede progress rather than enhance it.

The problem is that, while it is certainly possible to vest legal authority in an agency through legislation, the acquisition by that agency of genuine technical expertise and credibility in areas traditionally the responsibility of other agencies is likely to take much longer.

To the extent that the Government has a legitimate oversight responsibility with respect to this new industry, the quality of that oversight might well suffer under this approach.

This is DOT's principal concern with the approach taken in H.R. 3942. Other lesser concerns involve the problems of casting into statutory language inflexible or overly detailed procedures that would hobble this fledgling industry.

One-stop service, which can eliminate barriers and create an ideal regulatory environment is what the industry seeks and what we feel the Department of Transportation can and will provide.

Most important, we are pleased by this committee's strong interest in and support for a means to assist the commercialization of space. We look forward to working closely with you in this critical new endeavor, enabling America's innovators and entrepreneurs to exploit fully the opportunities available in this rapidly developing industry.

Mr. Chairman, I appreciate the opportunity to make that statement and I will be happy to respond to questions that you might have at this time.

[The prepared statement of Secretary Dole follows:]

TESTIMONY OF
ELIZABETH HANFORD DOLE
SECRETARY OF TRANSPORTATION
BEFORE THE SUBCOMMITTEE ON SPACE SCIENCE AND APPLICATIONS
OF THE HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY
ON COMMERCIALIZATION OF EXPENDABLE LAUNCH VEHICLES

November 18, 1983

Mr. Chairman and Members of the Subcommittee:

I am pleased to appear before you today to discuss H.R. 3942 and the Administration's plans to focus our resources and effort on commercialization of expendable launch vehicles.

Mr. Chairman, we are here to discuss America's newest transportation industry -- the industry that will boost payloads into space and enable mankind to exploit its newest frontier. My colleagues and I in the Department of Transportation are gratified that the President has designated DOT as the lead agency for this important endeavor. The President's designation of a lead agency affirms our view that the public will benefit most from a climate that frees the industry from needless regulatory barriers and allows it to develop, consistent with public safety, environmental, and national security concerns.

Some seeking to enter the satellite launch business have been reluctant to make substantial investments because the regulatory and approval process is so cumbersome. I believe that DOT is in the best position to ease that concern.

I view this new responsibility as an opportunity and a challenge. We can help launch a whole new U.S. industry -- one with potentials as unlimited as

space itself. We are already at work on plans to consolidate and simplify the regulatory process for space transportation using expendable launch vehicles.

And We look forward to working closely with the members of this Committee and Congress, the interested agencies as we proceed. We have already received welcome expressions of support from our friends at the Commerce Department, the National Aeronautics and Space Administration (NASA), and other agencies. Commerce's promotional capability, and NASA's extensive experience with the private ELV industry will be particularly invaluable as we work jointly to foster the achievement of its full potential. Quite clearly, it is an industry with a multi-billion dollar future.

Mr. Chairman, the market clearly exists for commercialization, and our common goal is to assure that the government clears the way for real success.

On May 16, 1983, the President signed a National Security Decision Directive which states that the policy of the U.S. Government is to encourage and facilitate commercialization of expendable launch vehicles. The NSDD also established a Working Group on Commercial Launch Operations under the Senior Interagency Group for Space, co-chaired by the Department of State and NASA. The Working Group was directed to address the following issues:

(a) Streamlining procedures to implement existing licensing authority;

(b) Developing and coordinating the requirements and processes for the licensing, supervision, and/or regulation of routine commercial launch operations from commercial ranges, and

(c) Recommending the appropriate lead agency within the U.S. Government to be responsible for commercial launch activities.

The Working Group recommended processes for the approval of commercial launch ranges and operations. It recommended ways to streamline existing licensing procedures. It recommended responsibilities to be assigned to a lead agency.

On November 16, 1983, the President designated DOT as the lead agency for the commercialization of ELVs. I would like to share with you, Mr. Chairman, and with other Members of the subcommittee our approach on how to deal with this exciting new transportation industry.

The Department of Transportation intends to work closely with the private sector and with other interested Federal agencies to streamline, coordinate, and expedite the various regulatory processes governing commercial launches using ELVs. We believe that an efficient, lean mechanism will provide a suitable climate for the growth and development of this industry.

Most of the fundamental issues involved in launching the commercialization of ELVs will be similar to those which occurred during the early stages of other transportation modes. DOT is in a position to deal effectively with these issues because of our extensive experience in the deregulation of the aviation, rail and trucking industries and in ensuring increased competition within and among the transportation industries.

Further, three of DOT's operating administrations will have important roles to play in launch and range approvals:

- The FAA will continue to exercise its current responsibilities

regarding the Nation's airspace and will oversee future commercial launch ranges;

- The Coast Guard will ensure that launches do not adversely affect the safety of U.S. and international shipping lanes; and

- The Materials Transportation Bureau will oversee the transportation of hazardous materials, such as fuels for ELVs to launch sites.

The Department will make extensive use of its long history of interactions with the aerospace industry in carrying out the President's mandate. We will also draw upon our advanced technological expertise in aviation, aerospace, civil, and industrial engineering.

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Implementation of a coherent federal policy can be achieved most effectively through determined coordination of the activities of the agencies involved. Centralization of all functions in a single agency, the approach taken in H.R. 3942, might well impede progress rather than enhance it.

The problem is that, while it is certainly possible to vest legal authority in an agency through legislation, the acquisition by that agency of genuine technical expertise and credibility in areas traditionally the responsibility of other agencies is likely to take much longer. To the extent that the Government has a legitimate oversight responsibility with respect to this new industry, the quality of that oversight might well suffer under this approach.

This is DOT's principal concern with the approach taken in H.R. 3942. Other, lesser concerns involve the problems of casting into statutory language inflexible or overdetailed procedures that would hobble this fledgling industry.

One-stop shopping, which can eliminate barriers and create an ideal regulatory environment, is what the industry seeks, and what DOT can and will provide.

Most important, we are pleased by this Committee's strong interest in and support for a means to assist the commercialization of space. We look forward to working closely with you in this critical new endeavor -- enabling America's innovators and entrepreneurs to exploit fully the opportunities available in this rapidly developing industry.

Mr. Chairman, this concludes my prepared statement. I would be pleased to answer any questions you or other Members may have.

Mr. VOLKMER. The Chair will recognize the gentleman from New Mexico for questions.

Mr. LUJAN. Thank you, Mr. Chairman.

And thank you, Madam Secretary. I am just real pleased to see throughout your statement, besides your enthusiasm, the objective that we want to achieve: free the industry from needless regulatory barriers, and deregulation. Those words are all through your statement. And I think that that's just great. That's the direction that this committee would like to see our space commercialization go, not to have all of these variables.

I just have a couple of questions. One—in my opening statement I mentioned that we should not limit this just to expendable launch vehicles because there are companies now working on small shuttles which go up into space and come back, so that—do you agree with that?

Secretary DOLE. Well, the decision that has been reached does focus on expendable launch vehicles. And DOT, as the lead agency, is responsible, really, for one part of the commercialization of space, as I see it—that having to do with the expendable launch vehicles.

I think that other endeavors, as you mentioned, and certain processes which would require returnable reusable vehicles like the shuttle—that would clearly, in my view, be under the purview of NASA, which has responsibility for commercialization of space outside of the expendable launch vehicles.

So as we see the breakdown, this is something that would be within NASA's responsibility.

Mr. LUJAN. Well, I don't mean the development of it. I am talking about a private company going out and developing their own small shuttle which will have to be regulated. And so I would imagine that that falls under the same category as would the expendables. We are going to have to have some kind of regulation and it would seem to me like that might make some sense to just leave it——

Secretary DOLE. Well——

Mr. LUJAN [continuing]. More expendable. Why don't we just say launch vehicle ?

Secretary DOLE. I think that particular—when you—the focus that you have pointed up this morning is such a long way in the future, that particular issue, that—perhaps that's something we should focus on a little further down the road. We have been looking specifically at this one part of commercialization of space—the expendable launch vehicles. And the shuttle that you mention, I think really is something that would have to be focused on at a later point because that is a long way down the road.

We are talking now about existing technology.

Mr. LUJAN. The other area that I would like to discuss with you—as you know, many—well, different members have supported, you know, some want NASA, some wanted the Department of Commerce, some wanted the Department of Transportation.

How do you see—you make the statement here that you received expressions of support from friends at Commerce, NASA and—so I assume they are supporting the administration's position that the lead agency be DOT.

However, there's many functions to the commercialization of space. One, of course, is the regulatory aspect of it. And one is the promotional.

Are you thinking in terms of a cooperative effort between DOT and the Department of Commerce so that they are in the promotional end, which they traditionally do; and you look at the regulatory end?

Secretary DOLE. Well, let me say, first of all, that an interagency review board, of course, is a key component of the Department of Transportation's plan. And we see, first of all, that board reviewing regulations and trying to determine where regulations can be done away with. In other words, pushing them out of the way, having a minimal amount of regulation, and then what is necessary, streamlining that regulation.

As you say, the promotional part of it is very important as well.

The Department of Transportation, of course, does have a role in promoting transportation industries. There is no question that the Department of Commerce is the lead on promotion as far as the Federal Government is concerned, promotion of businesses and industries. And certainly we would want to work very closely with the Department and I would see them playing a lead role there as a member of this interagency review board on the promotional side.

However, the Department of Transportation certainly has a role to play there as well, I believe. And we would do that in a very close cooperative manner with the Department of Commerce.

I do feel, No. 1, though, is what the industry feels must happen first. That is to set up a lean, efficient mechanism whereby this fledging industry can get the authorizations that it needs to move forward efficiently and quickly. We want to develop the industry; we want to promote the growth of the industry. And the promotion of the product as such is something that certainly is important, but you don't want the cart before the horse. Structure and the mechanism, I think, is crucial at this point in time.

Mr. LUJAN. I think you are right.

Thank you very much. Thank you, Mr. Chairman.

Mr. VOLKMER. The gentleman from California?

Mr. LOWERY. Thank you, Mr. Chairman.

Madam Secretary, we are delighted to have your testimony.

A couple of questions. Do you foresee that ELV's would only be used for commercial payloads or do you see their use also for military or security payloads, or scientific?

Secretary DOLE. No, I think it would be the former. It would not be for a military.

Mr. LOWERY. Strictly for commercial?

Secretary DOLE. For commercial; that's right.

Mr. LOWERY. And all other scientific or security payloads fly in the shuttle?

Secretary DOLE. I'm sorry. You said all other?

Mr. LOWERY. Military and scientific payloads would be reserved for the shuttle?

Secretary DOLE. Well, I think it would be under the purview of the Department of Defense and NASA.

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Mr. LOWERY. There's nothing to preclude them using commercial vehicles? ELV's?

Secretary DOLE. Well, I think the military—Jeff, did you want to speak to that?

Mr. SHANE. Well, I—sorry. Congressman——

Secretary DOLE. I'm sorry. Let me introduce Jeff Shane. He is Deputy Assistant Secretary for Policy and International Affairs.

Mr. SHANE. Congressman, you are quite right. Nothing, of course, would preclude any Government agency from employing a commercial private sector ELV for any mission that it had. Of course, if it had a security component to it, then, of course, there would have to be a very close examination of the extent to which the security of the mission were in fact protected.

Scientific missions, of course, could be commercial themselves. And so, obviously, those would be one important market for the commercial ELV sector.

Those scientific missions that Government is interested in promoting, if there were no room on the shuttle, would be a secondary market for the commercial ELV. But primarily, we see the commercial ELV being available as an important launch vehicle for the commercial payload sector.

Mr. LOWERY. The interface between our—our Federal vehicles such as the shuttle, and commercial ELV's, should the Federal Government be in a position of competing against the private sector? And will we not be doing that? And how will we handle the competition as specifically as it relates to a pricing policy for shuttle services?

Secretary DOLE. Let me say that I think there is plenty of room for both. I don't anticipate that there would be a change in the space shuttle system's pricing policy. The national security decision directive stated that the NASA shuttle pricing policy would remain in effect until 1988, at which time there would be full cost recovery policy in place.

And so I don't anticipate that it would be otherwise.

Mr. LOWERY. You see that staying in place through 1988?

Secretary DOLE. Yes, I do.

Mr. LOWERY. In terms of marketing, do you see much of an international market for ELV's?

Secretary DOLE. I do. I think that there is indeed an international market. Of course, at this point, the French Ariane is the major competitor with the shuttle. The Japanese are moving. The U.S.S.R. is not far behind the Japanese. And I think it behooves us to move as quickly as possible to get this mechanism set up and to help this industry to develop and to grow, and to take advantage of its potential.

We have been the lead in this area. We want to retain that. And certainly the Department of Transportation will do everything possible to insure that our industry is able to move quickly and expeditiously.

Mr. LOWERY. Well, I agree. I think we had our head in the sand when we thought that all needs could be met with the shuttle. And, of course, the French immediately moved in on that market which we forsook.

Specifically, how do you plan to market abroad? It just strikes me that Commerce has generally been the American agency responsible for promotion abroad. Is there going to be interface and, if so, how? What are your plans? And I know, Madam Secretary, that the decision was just made and within the administration there's certainly a lot of detail yet to be worked out.

Secretary DOLE. Let me say that, first of all, of course, Commerce is the lead there. But there is no question that the Department of Transportation, as far as representation in international organizations—the Coast Guard is very much involved with maritime organizations and—and they are—will be instrumental in the development of advanced satellite navigation technology.

The Department will be—have a major leadership role with respect to the advanced global system because that, of course, involves the 23 satellite telecommunications capability that will foster and improve communications for our aircraft and for our ships.

So I see the Department playing a role but this is clearly an area where the Commerce Department, in terms of marketing, would have the major responsibility and the lead.

Mr. LOWERY. How do you plan to interface with Commerce in terms of marketing?

Secretary DOLE. Well, the Interagency Review Board will be established immediately and that——

Mr. LOWERY. Who all will be on that Board?

Secretary DOLE [continuing]. Will be the bottom mechanism.

There is a long list that would be involved. Of course, the State Department; from my own Department, the FAA, the Coast Guard, the Materials Transportation Bureau, the FCC, the Environmental Protection Agency; OSHA, from DOL, from the Department of Labor, NASA, the Department of Defense; Commerce, of course; the CIA, and ACDA for arms control agreements.

Mr. LOWERY. OK. Thank you, Mr. Chairman.

Thank you, Madam Secretary.

Secretary DOLE. Thank you.

Mr. VOLKMER. The Chair will recognize the gentleman from Virginia.

Mr. BATEMAN. Thank you, Mr. Chairman.

I have been looking forward to this meeting for some time with the assurance that one of the—two of the most competent and capable public servants in America would be before the committee on the matter of the lead agency for expendable launch vehicles.

Until very recently, I didn't know which of the two people it would be—Secretary Baldrige or Secretary Dole. I certainly welcome Secretary Dole to the committee this morning. I have enjoyed her responses to the questions that I have heard; I have been trying to get through the prepared text which I haven't finished.

This is by way of a preference, Mr. Chairman, that I am going to delight you this morning by not having any questions. I do want to digest the testimony and am very pleased to have Mrs. Dole here and to have her statement.

Secretary DOLE. Thank you, sir.

Mr. BATEMAN. And if I have any time remaining, I will yield it to my colleague Mr. Lowery.

Mr. LOWERY. Madam Secretary, I do have one followup question.

How are you planning to develop the in-house expertise in this whole area of space and commercialization with ELV's?

Secretary DOLE. Well, there is quite a bit of expertise already but let me say that NASA, of course, is the lead in terms of this particular area. We would certainly be working very closely with NASA.

Mr. LOWERY. Do you see personnel transferred from NASA into the Department of Transportation?

Secretary DOLE. No, I don't. I don't think that would be necessary at all. The Department has over 13,000 engineers—the Department of Transportation. And they specialize in civil aeronautical, navigational, and petroleum engineering. We also have 11 research centers, development and test centers, in the United States. And they can apply their efforts toward facilitating this new industry.

I mentioned earlier the Coast Guard's expertise in working toward the development of the advanced satellite navigational technology. They are involved in a number of international maritime organizations and are certainly going to be instrumental in that area. And we have the major leadership role with respect to the advanced global position systems—the 23 satellite telecommunications capability, which will foster improved communications, as I mentioned, among the world's aircraft and ships.

We have the responsibility, through the FAA, for the modernization of our air space system, which is a $10 billion system designed to double our capacity in the airways and to provide the latest automation and technology in that area. And, obviously, as we go forward with that project, this industry can draw upon that expertise.

We work with NASA in aeronautical research at the Department of Transportation. So, I think there's certainly expertise there. But, again, the idea is that we share the Interagency Review Board—NASA having a great deal of expertise in this area. And we also are deregulators in the Office of the Secretary. And I think, again, that's a key role that our Department would play is trying to remove regulatory barriers and to streamline those minimal regulations that we feel are necessary.

Mr. LOWERY. Thank you. All of the vast apparatus that you have is impressive in terms of coordinating where we should be going. But how about specifically of how we are going to get these things launched, which I think is where the most immediate problems are going to come, and where the immediate expertise is going to be needed; and it is a very specific mission.

Secretary DOLE. Well, I think if you are speaking of the technology that's needed for the launch, that technology already exists.

Mr. LOWERY. No, it's more the coordination and the process in the interface——

Secretary DOLE. YES.

Mr. LOWERY [continuing]. As opposed to the——

Secretary DOLE. I think we are qualified to play the role of coordinating the agencies. This is one of the disagreements that I had with the legislation.

Mr. LOWERY. But you are going to be having the responsibility that NASA has had previously. And where is that expertise going

to come from, specifically as it relates to coordinating what the private sector as——

Secretary DOLE. As I see, as far as research and development, NASA would continue to play that role.

Mr. LOWERY. No, I am not talking about R&D. I am talking about the specific aspects of launching, which I think is where most of the concern is. That has previously been a function totally reserved to NASA and the Government. That's an expertise that I don't believe the Department of Transportation currently has.

And how are you going to develop it?

Secretary DOLE. I—I don't see the Department—in other words, again, it's a coordination role.

Mr. LOWERY. But we are getting NASA——

Secretary DOLE. The technology is there.

Mr. LOWERY [continuing]. Out of the loop. But the goal is to get NASA out of the loop as far as those launch services are concerned.

Mr. SHANE. Congressman, if I could address that question.

The role of the lead agency is not to supplant the existing expertise within the Government today. In fact, as the Secretary said, if we have one difference with the thrust of H.R. 3942, it is that the bill would appear to try to transfer that expertise by legislation from one place to another. We think in the real world that probably doesn't happen in the near term which is why we feel the emphasis should be on leadership and coordination.

We have, as the Secretary said, a lot of expertise already within the Department. But the real expertise that we offer in the role of lead agency, is the expertise as a deregulating agency. We have hands-on experience with a variety of capital intensive high technology industries. We understand them; we are comfortable with them. And we feel that we can, working with other agencies, capitalizing on their technical expertise, not trying to supplant it, move this industry into a takeoff phase.

Mr. LOWERY. Excuse me. NASA intends to be involved for quite sometime in the actual launch process?

Secretary DOLE. I think the confusion here is that NASA is not out of the loop. In other words, what your legislation would require is that one agency develop all of the expertise, as I understand it, of the various agencies.

Mr. LOWERY. Well, the new R&D——

Secretary DOLE. This is where——

Mr. LOWERY [continuing]. Will continue to be with NASA, understandably?

Secretary DOLE. That's right. This is where we——

Mr. LOWERY. This is off the shelf, nothing to do with technology. We are not talking about launching vehicles——

Secretary DOLE. Talking about the——

Mr. LOWERY [continuing]. Like Centaurs——

Secretary DOLE [continuing]. Expendable launches——

Mr. LOWERY [continuing]. Or Atlases, for instance. Something that's been around for 25 years.

Mr. SHANE. What we anticipate is, of course, that the private sector, once we get Government out of its way, will come up with technologies that even the Government hasn't yet come up with.

Is—the Government has had certain missions which were Government style missions. The private sector is looking at a variety of elements of the market that the Government had not had a reason to focus on because of—of other emphases that it shows.

The private sector now is examining technologies, propulsion systems, and so forth, that the Government—that NASA has chosen to deemphasize in its own program for very good reasons. And it's that—it's that addition to the Government's sponsored technology that we feel we can foster through a rationalization of the regulatory process which they now face.

Mr. LOWERY. Well, do you see a deregulating in the area of launch services, for instance?

Mr. SHANE. There is no question but that there is an important Government oversight responsibility in launch services. There may be some regulations, however, that are being applied merely because they were drafted in another context and some government lawyer feels that because of the way launch services are handled——

Mr. LOWERY. They have been dictated by national security needs, primarily.

Mr. SHANE. To the extent—to the extent, Congressman, that national security considerations are at stake, of course, there would be Government oversight of launch services and those—and that Government oversight would be handled as efficiently as we can with—with the Government's concerns in the forefront.

Our concern is that there are variety of ways in which even legitimate regulatory functions can—can be mishandled, can be handled too slowly, can be put on the back burner—can in effect create a barrier to an entrepreneur where there should not be a barrier. There should be a predictable, clearly defined regulatory requirement. But rather than becoming an obstacle, simply becomes a gateway to the beginning of a—of a new service.

Mr. LOWERY. But specifically you don't see any dramatic changes in how we are currently launching vehicles in terms of NASA having that primary function?

Mr. SHANE. On national ranges, NASA and DOD would continue to exercise their current roles. We are also looking, however, at the possibility of commercial ranges where we do have to set up a new—a new system. And that will be an important responsibility for DOT as the lead agency working with the other agencies.

Mr. LOWERY. And you don't see a problem with NASA in the competition with the shuttle, which will still be totally under their domain, for commercialization of ELV's?

Mr. SHANE. That's correct.

Mr. LOWERY. OK. Thank you very much. Thank you.

Secretary DOLE. Uh-huh.

Mr. VOLKMER. The gentleman from New Mexico.

Mr. LUJAN. I have another question because I don't understand what you're saying. It seemed to me like the legislation—no, let me back up.

What you are saying is that the legislation is asking DOT to acquire that expertise that exists in NASA, or other agencies.

As I see the legislation, it simply says that DOT, if, assuming that that's the decision of the Congress also to make that lead

agency to agree with the administration. The DOT will license a particular shot, or a company, or however it is decided to be done. But that you must take into consideration liability insurance requirements, public safety, national security, and determine whether that applicant qualifies for the license.

And it goes on to say that the information that you will get is the name and address of the owners, the launch site, post-projectories, those sorts of things that are enumerated.

Where in the legislation does it say that you will supplant or acquire that expertise that NASA now possesses?

Mr. SHANE. Congressman Lujan, if I could take that question. The problem with the legislation is that it envisions a transfer of legal authority from the agencies that currently exercise it to the Department of—well, in fact, it's the Department of Commerce in the legislation—to whichever lead agency is chosen. It would now be the Department of Transportation under the administration's decision.

The difficulty with transferring legal authority with that—is that—excuse me, let me back up. It transfers the legal authority for the decision to the lead agency—legal authority for the granting of a license. That license, according to the legislation, would be granted after nothing more than consultation with the agencies that currently exercise the legal authority that would be transferred.

Mr. LUJAN. What you are then saying is that don't transfer that legal authority for us to issue the license. We will simply be a coordinating organization. We will go get the license from——

Secretary DOLE. That's right.

Mr. LUJAN [continuing]. FCC. We will go from the FAA or from whoever else you need to get that license from. Is that what you are saying?

Secretary DOLE. That's right. We would provide the leadership. In other words, it's a matter of the Department, first of all, in sharing this Interagency Review Board to get that mechanism set up to clear away unnecessary regulations and to streamline necessary regulations. Then when an applicant comes to the Department of Transportation, the approval would be expedited as a one-stop service. In other words, the Department would then shepherd that application around through the other departments and agencies and obtain the necessary approvals so that the applicant would have just one place in Federal Government where it would come for a—for the approvals. And we would——

Mr. LUJAN. And then you would hand to the applicant 6 or 16 different approvals?

Secretary DOLE. Well, it would be a consolidated document. We anticipate one form and it would be a consolidated form. This is something that the review group, of course, has to work out.

Mr. LUJAN. I'm——

Secretary DOLE. And so that's—but I think it's—there's a function there also of serving as the honest broker, if you will, when there are disagreements or when there are, you know, to try to facilitate, to expedite, to coordinate, to do this quickly and efficiently.

Right now an applicant has got to go to many different places within the Government and there's not been that focal point of one agency that they can turn to.

So with our expertise as a deregulator, and that means understanding the regulatory process, in order to know how to deregulate. We have had that lead role in the Federal Government in the administration. We would utilize that to quickly and efficiently set up a structure and a mechanism that the private sector can utilize. And then we would, as I say, shepherd it through the process, the applications as they come in.

Mr. LUJAN. Don't you need some kind of authority to regulate? You can't just jump in and regulate anything you want to. You can't——

Secretary DOLE. The great——

Mr. LUJAN [continuing]. A new mode of transportation.

Secretary DOLE. See, it's not a matter of—in other words, existing agencies and departments would continue to perform. They would retain authority. They would continue to perform their regulatory functions.

Now, those functions would be reviewed to determine, No. 1, are they necessary at all; and No. 2, if necessary, how can they be streamlined? So that it will—will provide a smoother process for the private sector.

But the agency and departments on the interagency review board would continue to perform their regulatory functions. That's what we were concerned about earlier in terms of transferring those to another agency. The time that it would take to create that kind of expertise and credibility would, we think, undermine the process.

Mr. LUJAN. How many people does someone wanting to launch an ELV—how many agencies, how many permits does that person have to get? Do you have that?

Secretary DOLE. I think it would depend on the circumstances, but the long list that I read a few moments ago are the ones involved. There are three at the Department of Transportation, with FAA, the Coast Guard, the Materials Transportation Bureau; there's the FCC, use of radio frequencies; there is the Environmental Protection Agency, environmental impact statements; there is OSHA in the Department of Labor, with workers' safety on the ranges, on commercial launch ranges; there is NASA, of course; DOD; the State Department, with international agreements, international trade and arms; Commerce, of course, from the promotional standpoint and export controls; CIA, national security and arms control agreements would have to be reviewed.

Mr. LUJAN. You got your work cut out for you.

Secretary DOLE. That's right.

Mr. LUJAN. Thank you.

Secretary DOLE. We're very enthusiastic about it.

I might just add that another component to the Department of Transportation's ability to contribute to this process, I believe, is that many of the problems in this fledging transportation industry are similar to those that one would see in other transportation modes when they were in their infancy.

For example, the things that we do on a day-to-day basis, such things as roads and access to remote sites, eminent domain, in establishing commercial launch ranges, that's another function that's a normal role of the Department. Trying to work out the problems where local, Federal, and State regulations conflict, operational delays due to construction problems, these kinds of things, are very much within the day-to-day operations at the Department and, I think, would give us some expertise with regard to this new industry.

Mr. LUJAN. Thank you, Mr. Chairman.

Mr. VOLKMER. Thank you.

Secretary Dole, I have some questions to continue that on.

And I would like to preface my remarks by saying that some of us have been working on a redraft of the bill, and we recognize the problems that you have pointed out in the bill. And it is not just a problem of the expertise factor of one lead agency having all the legal requirements or to meet those legal requirements of all these various agencies, but we also have, as you know, jurisdictional problems up here on the Hill, and we would have had this bill probably ending up in any number of committees——

Secretary DOLE. Right.

Mr. VOLKMER [continuing]. If we didn't change it. So we had already provided for facilitation by a lead agency instead of having the actual law and remove that one subparagraph on page 6.

Secretary DOLE. Very good.

Mr. VOLKMER. But I'd like to continue on because, when we get into this area where you do not have the authority, the legal authority, to do these things, then the other agencies still do.

As I envision it, let's say an applicant—you, first—well, let's go back—you, first, would prepare a set of forms that an applicant could fill out which would have all the information necessary for all the agencies.

Secretary DOLE. One form.

Mr. VOLKMER. One form.

Secretary DOLE. Exactly.

Mr. VOLKMER. Right. It may be a number of pages, but it would be one form, technically.

Secretary DOLE. Consolidated.

Mr. VOLKMER. Right. It might be several hundred—and then they provide it to you.

Now, we got some other things going on immediately, right now, in this area that will impact on this. As you may or may not know, we are in a process at this time also trying to commercialize the LANDSAT land-sensing procedure. We also know of private concerns right now that have already flown a platform on a shuttle and propose in the future to fly their own platform for private sensing—all right—land sensing.

So let's say that this all comes to pass and, by the time that they're ready to go and they come in with the application, and you do not have the people with expertise on board, they are providing a certain sensing device that your people know very little about, but you have to send it over to DOD to find out about the national security concerns; is that correct?

Secretary DOLE. Yes.

Mr. VOLKMER. Now, DOD comes back and says, I'm sorry, we can't approve this because of national security concerns. How are you going to argue with them?

Secretary DOLE. Well, this is where, as I said, being the honest broker, we would try to resolve the difficulty there. And I think that is something that—you know, the Executive order is going to provide the authority which we would need in this instance to coordinate. There may be reasons why this application cannot be approved. But we would be in the role there as the person—the broker, in other words—trying to determine what the problems are to resolve it if possible.

Mr. VOLKMER. Do you——

Secretary DOLE. Do you want to——

Mr. VOLKMER. Go ahead.

Mr. SHANE. I'm sorry.

I'd only add that the difficulty in many cases is that, where there is a problem with an application, it becomes a problem within the agency reviewing it. There may be several views within the agency. And without a driving force, an external force, if you will, insuring that whatever decision that agency reaches is reached in real time, the thing could drag on forever. The applicant is sitting there not knowing what's happening to his application. He can't find out. People aren't willing to say anything because there's a difference of view within the agency and nobody wants to commit himself. And the end result is what becomes an absolutely insuperable barrier to making some progress.

So that with a lead agency, even if there turns out to be a problem in an application, the very real improvement is that you—the applicant will learn about that problem right up front. As lead agency, DOT would act as a conduit for that information as fast as possible, would work both with the applicant and with the objecting agency to insure that everything possible is being done to rectify the application in whatever way is necessary and, in most cases, we anticipate that that process would work to insure that the applicant can move forward.

If, as the Secretary says, there is some absolutely uncorrectable deficiency, well then there may be a real problem with the application.

Mr. VOLKMER. Well, how do you know if it is absolutely uncorrectable if you do not have the expertise on board and you have to rely on the other agency to tell you whether it is good or bad?

Mr. SHANE. Mr. Chairman, I don't think that we'd be relying slavishly on the expertise of the other agencies. That is the advantage of the kind of expertise already built into the Department of Transportation.

We would certainly look to them. We expect them to exercise their expertise as responsibly as possible. But the fact is that, as lead agency, either with legislative authority or with the authority of the moral mandate of the President in the Executive order, or with both, it would be our responsibility to insure, using all the expertise available to us, both in-house and outside, to scrutinize the decisions, the opinions, the views and the regulations of each of the agencies in the process to insure that those regulations are being

implemented responsibly and that there are no artificial barriers to this new industry.

Mr. VOLKMER. Where is your pressure going to come from? Let's say that you have an application and the application has been over to FAA for 45 days already and they haven't acted on it. Where's your pressure?

Secretary DOLE. Well, the FAA, of course, reports to me, as the Secretary of Transportation.

Mr. VOLKMER. I realize that.

Secretary DOLE. So that one will be fairly easy to resolve.

Mr. VOLKMER. Do you believe that you could bring sufficient pressure on FAA to act expeditiously if they say we're busy with all these other——

Secretary DOLE. Yes, I do.

Mr. VOLKMER [continuing]. Things we got going?

Secretary DOLE. Yes, I do. And I think that timetables can be set up. As we set up the interagency review board, we will provide for timetables and for procedures to expedite.

Mr. VOLKMER. Could you provide such same pressure on the State Department and the Department of Defense?

Secretary DOLE. That will be done with the other participants in the interagency process, Mr. Chairman. And I think that certainly we can—as a group that is anxious to work together to promote this industry, I think that we can set up a set of procedures which will expedite the process.

Mr. VOLKMER. Well, we're talking about a group. That brings me to another question. Going back to your testimony about the senior interagency group—working group—making the recommendations on ELV approval process, responsibilities to be assigned to lead agencies, et cetera, has the SIG recommended a lead agency?

Secretary DOLE. No, they did not.

Mr. VOLKMER. They have not, have they?

Secretary DOLE. They deferred to the Cabinet Council, I believe, on that.

Mr. VOLKMER. All right. So the Cabinet Council——

Secretary DOLE. Actually, they recommended two, I believe; is that not right?

Mr. SHANE. Yes.

Mr. VOLKMER. Right.

Secretary DOLE. There were two options.

Mr. VOLKMER. Yes, Commerce and DOT.

Secretary DOLE. It was either the Department of Transportation or Commerce, but they did not specify which one.

Mr. VOLKMER. Has the SIG group said anything about the approval process on ELV's and the responsibilities of a lead agency?

Secretary DOLE. There are recommendations for a lead agency responsibility, yes.

Mr. VOLKMER. We haven't seen this——

Secretary DOLE. And we would be glad to provide that to you.

Mr. VOLKMER. I'd like to see it, because we haven't seen this report at all from the SIG group.

Secretary DOLE. All right.

[The information follows:]

The Department of Transportation (DOT), as part of its lead agency role, conducted a review of the licensing process and of the responsibilities of Federal agencies with authority over some aspect of a launch.

There is relatively little experience--either Federal or private--with licensing commercial space launches. Approval processes to date include the proposed launch of the Percheron and the launch of the Conestoga by Space Services, Inc. (SSI), and the proposed launch of the Dolphin by Starstruck. Because these companies were testing new rockets, their experiences may not be an accurate indication of the Federal licensing process required for more routine launch requests.

This paper, therefore, is based on the following premises:

- It attempts to provide an objective accounting, based on DOT's observations of the process, that confronted these two companies when they sought launch approval. The licensing agencies themselves might have a different interpretation of the events.

- There is a difference between conducting experimental launches to test a rocket and its performance, and the routine launch of a tested and proven rocket. Starstruck and SSI may now face a simpler and shorter approval process if they propose further launches using the same rockets and launch scenarios.

- Although a number of Federal agencies played some role in the licensing process, their respective levels of involvement varied significantly. Some of the licensing steps were routine and simple, others were more complex.

- This paper identifies the key Federal agencies and the general requirements of the licensing process. It does not address the degree or frequency of interaction between the launch companies and Federal government during the review process.

- The list of Federal agencies outlined below is not all-inclusive. The number of involved Federal agencies is dependent on the nature and complexity of the launch. For example, SSI required a license from the Bureau of Alcohol, Tobacco, and Firearms (BATF) (for using foreign manufactured calibrating rockets), but Starstruck did not. No companies, to our knowledge, have conducted launches of a nature requiring review by the Environmental Protection Agency or Occupational Safety and Health Administration.

- Finally, this discussion describes the process experienced by the launch applicants prior to the involvement by DOT as lead agency. Some improvements to the process have been instituted already.

THE INITIAL STEPS

- The two launch applicants had to conduct extensive legal research to determine which Federal agencies are involved.

- The applicants, recognizing the uniqueness of their proposals, thought it advisable to approach key Federal agencies several months before submitting a license application or an exemption request to notify them of their prospective launches and to identify special requirements that they might have. For example, Starstruck met with the Department of Defense (DOD), Federal Aviation Administration (FAA), National Aeronautics and Space Administration (NASA), Office of Science and Technology Policy (OSTP), and Department of Commerce (DOC), as well as Congressional staff.

- As newcomers to the Federal process, SSI and Starstruck failed to identify all the Federal players which had responsibility for approving some aspect of their respective launches. Already the number of agencies participating in the approval process, directly or indirectly, exceeds those originally identified by SSI or Starstruck. The current list of involved Federal agencies includes: The Department of State (Office of Munitions Control (OMC)), NASA, Office of the Secretary of Defense, Air Force, NORAD (North American Aerospace Defense Command: action separate from USAF), Navy, Office of the Secretary of Transportation (DOT), FAA, United States Coast Guard (USCG), DOT's Materials Transportation Bureau (MTB) and Bureau of Motor Carrier Safety (BMCS), Bureau of Alcohol, Tobacco and Firearms (BATF), and the Federal Communications Commission (FCC), as well as state and local officials. It should be noted that while these agencies played roles in the launch approval process, their levels of involvement varied widely from simple coordination to actual review and approval.

- While applicants may have been able to identify the appropriate agency, they, in some cases, contacted the wrong persons or part of the organization. There were a number of instances where the applicant submitted material to or responded to advice and guidance from agency officials not responsible for the decision.

THE BASIC LICENSES

- Approval of a single license might involve the review, coordination or approval of more than one agency.

- The number of specific licenses or exemptions required depends on a number of factors (e.g. whether the launch is in the U.S. or in international waters, whether imported rockets are used, etc.). Key licenses or exemptions are:

-- Export license from the Department of State. Space launches are currently treated as an export of a product from earth into space.

-- Radio operators' license and frequency allocation from the Federal Communications Commission.

-- Arms import license from the Bureau of Alcohol, Tobacco and Firearms if any explosive devices are imported, as in the case of SSI. If no explosive device is imported, this license is not required.

-- Exemptions from regulations for transportation of hazardous materials from the Materials Transportation Bureau.

-- An exemption for travel through airspace from Federal Aviation Regulations, if the launch occurs within the US. (If the launch takes place in international waters, then the Department of State, under its export license authority, asks the FAA to review the application and address the issue of safety.)

Export License. An applicant is likely to approach the export license process first, as this is perceived as the most complex and time consuming requirement. A launch firm submits to the Office of Munitions Control (OMC) a formal application for a "License for Temporary Export of Unclassified Defense Articles".

o For the past two planned launches, the Department of State reviewed the proposed export from the standpoint of national interest, foreign policy and national security. To assist this review, OMC in turn requested the Department of Defense (DOD) and NASA to review the proposal. DOD provided the National security review and appeared to perform only a cursory technical review to identify the performance characteristics of the rocket. NASA reviewed the application to determine whether the proposed launch presented any undue risk to the public and to verify that the launch vehicle would perform as stated. Since Starstruck proposed to launch in international waters, OMC also asked FAA to review the proposal from the perspective of public safety. FAA also reviewed the application in providing for the clearance of airspace.

o Because the Department of State relied on a number of agencies for supporting reviews, the process was subject to some delays. The applicants apparently were not clear about the relationships between the primary licensing agency and the agencies providing supporting reviews. For example, the procedures for requesting additional information from the applicants were not always consistent. Sometimes the questions

went straight from the reviewing agency to the applicant and other times to the applicant through OMC.

- It appears that parts of NASA's and FAA's reviews for OMC were duplicative, not by their own design but because each agency had been requested to perform a similar review. In the case of Starstruck, the same range safety report was provided to both NASA and FAA. Many of the questions asked by NASA and FAA were similar.

- It appears that none of the agencies supporting OMC had specific procedures developed to handle the license applications. The information initially requested of the applicants was based on what the agencies thought they needed to know. After the first review, it was clear that more information was needed in addition to the original data. Over a period of time, the agencies' questions became more refined and more specific.

- For each of these two launches, it took between six and seven months to obtain an export license. One applicant received a verbal approval four days before the scheduled launch and the other a month before the planned launch.

Frequency Allocation. In order for a launch firm to operate its communications and telemetry equipment, it must apply to the Federal Communications Commission for a radio operator's license and frequency assignments. It appears that a launch firm could require as many as eight to twelve different frequencies. Temporary use of frequencies involves an application to the Federal Communications Commission. The approval processes, it appears, have been fairly straightforward and prompt.

Arms License. Space Services, Inc., was required to get a license from the Bureau of Alcohol, Tobacco and Firearms (BATF) to import sounding rockets with which it planned to calibrate its radar. BATF's regulatory authority stems from its responsibility for the International Traffic in Arms Regulations (ITAR) with respect to importation of arms and munitions into the United States. This was a short process for SSI. It submitted an application, paid its fee and obtained an approval within a couple of weeks.

Exemption for Transport of Hazardous Materials. A launch firm, which proposes to transport hazardous materials in a manner other than specifically prescribed by Federal regulations, must seek an exemption from the Materials Transportation Bureau (MTB). Once an exemption to a specific procedure is obtained, however, the exemption is good for two years.

When a launch firm applies to MTB for its exemption, MTB by regulation proceeds to issue a notice of the proposed action in the Federal Register for a 30-day public comment. At the close of this period, MTB coordinates the proposed exemption with affected DOT agencies. This is likely to include the Bureau of Motor Carrier Safety and, if marinecraft are involved, the United States Coast Guard. Any organization involved in the MTB coordination can

make a comment or suggest a requirement which may then be included in the exemption approval.

Airspace Restrictions. If the launch applicant seeks to launch from anywhere in the United States or its territories, it is subject directly to FAA regulations concerning operation of rockets in US airspace. SSI applied directly to FAA for an exemption from this regulation. (Starstruck, because it was launching from international waters, was not directly subject to the FAA regulations, but at the State Department's request, FAA did become significantly involved.) FAA's primary concern in reviewing space launch applications is the protection of public safety. Its direct authority is to provide or deny airspace clearance and exemptions.

For both planned launches, FAA requested the technical details of the launch vehicle, its trajectory, and overall safety/destruct features. The purpose of this data was to: assure that the launch vehicles were capable of the performance characteristics ascribed to them and to provide a basis for determining how much airspace was to be cleared to protect aviation and other aspects of public safety.

The FAA reviews were detailed, and involved extensive dialogue between FAA and the applicants. In order to determine how large an airspace to clear for each launch, FAA conducted analyses to determine the trajectory and possible dispersion points of the rockets or their components throughout the flight regime. FAA also coordinated these actions with the appropriate safety agencies such as NORAD, USCG and Navy.

STATE AND LOCAL OFFICIALS

Both Starstruck and SSI dealt extensively with State and local officials. The state and local regulations affecting these companies related to safety, law enforcement, environment, employee rights, building codes and standards, etc.

INSURANCE REQUIREMENTS

In both licensing actions, the Federal government and launch companies addressed the U.S. obligations under the Space Treaties. In the case of SSI's launch request, NASA took the Federal lead in setting SSI's liability insurance requirement. NASA assumed this role because SSI was using a NASA-owned Minuteman rocket engine.

For Starstruck's launch request, the Department of State established the level of insurance needed for the launch.

Mr. VOLKMER. Now, another thing that we've already caught within our legislation in looking at it is the problem—we get to launching, and we have the vehicle launched, but we don't say anything in our legislation what happens thereafter and what the responsibility of the lead agency is.

Do you envision any activities of the lead agency, such as reporting by the commercial firm as to the operation of the satellite, that the launch vehicle worked properly, that the satellite is working properly—we also have had testimony as to the problem of reentry of a vehicle maybe 5, 10 years from now, 15 or 20 or 50 years—about provisions for that and for reentry?

Secretary DOLE. Yes, that would have to be worked out by the interagency group, the follow-through. And I think the agency responsible, again, would have follow-through responsibilities as well. But that really has not been spelled out. That's something that would have to be——

Mr. VOLKMER. But surely we are going to——

Secretary DOLE [continuing]. Worked out.

Mr. VOLKMER. Surely we're going to require anyone who's providing satellites in space that, if there is something—in other words, they're going to provide in their application what it's for and what it's supposed to do, et cetera, that if something does happen—prevents that from occurring properly—that they're going to have to report to the lead agency about it and the effects of it, so that you can keep on top of what's going on. Do you agree with that?

Secretary DOLE. Right. And I would certainly think that—that the safety aspects of this are a top priority, and that certainly comes to mind. So there's no question that we would want to focus on that very carefully with the other agencies and departments.

Mr. SHANE. Mr. Chairman.

Mr. VOLKMER. Yes.

Mr. SHANE. I'm sorry.

Mr. VOLKMER. Go ahead.

Mr. SHANE. Excuse me.

The lead agency would certainly serve as a repository—for all information anywhere in the Government about the launches that have taken place, the objects already in orbit, and their results.

Mr. VOLKMER. Now, here again, we're only talking about those on a commercial site.

Mr. SHANE. That's right.

Secretary DOLE. That's right, yes.

Mr. VOLKMER. I'll make it clear. We are not talking about government launches, right? Anything from the shuttle, you don't have anything——

Secretary DOLE. No.

Mr. VOLKMER [continuing]. To do with; is that correct?

Secretary DOLE. That's totally separate. That's right.

Mr. VOLKMER. Right.

Mr. SHANE. That's correct.

Mr. VOLKMER. OK. Even though it may be a—it's a commercial satellite from a—the shuttle?

Secretary DOLE. Yes.

Mr. VOLKMER. Still you would have no—anything to license, right?

Mr. SHANE. We're talking only about those payloads which have been boosted by commercial ELV's.

Mr. VOLKMER. All right.

I've been handed a note here—go back a little bit on the SIG thing. You mentioned the Cabinet Council. Did the Cabinet Council make the recommendation that you be the lead agency, or was this finally developed and the President made the decision himself?

Secretary DOLE. Well, actually, the two Departments presented in a meeting this week before the Cabinet Council their views as to what they could contribute to this process. And it was determined by the President as to which of the Departments should be the lead Department.

Mr. VOLKMER. The Cabinet Council themselves did not make a vote on it then themselves?

Secretary DOLE. That's right. They did not.

Mr. WALKER. Mr. Chairman, would you yield on a question that you just asked a moment ago?

Mr. VOLKMER. Yes, I yield to the gentleman from Pennsylvania.

Mr. WALKER. I thank the gentleman for yielding.

On present flights of aircraft, do we require them to present us with manifests of everything that's on board that aircraft and exactly what's going to happen to it at the end of its journey?

Mr. SHANE. There is probably no Federal requirement, unless you are talking about international transportation, that everything on the aircraft be manifested and submitted to the Federal Government. That would be a paperwork requirement with no particular benefit, just a burden on the industry for no good reason.

We do have international treaties, however, that require us to maintain responsibility for those objects which are put into space, either by Government or nongovernmental entities. And for that reason, it becomes terribly important that the Government maintain full knowledge, not only of what is in space, but what those objects are doing, how they are performing.

Mr. WALKER. Well, understandably. But my point here is that we seem to be establishing a regulatory standard greater for space flight than we now require for air flight. Now, you are saying that's to satisfy treaty obligations; is that correct?

Mr. SHANE. In the first instance, there are international obligations that the United States does have under treaties to maintain responsibility for—to assume liability for, in many cases, objects in space. It is, if you will, international commerce.

International aviation has regulatory requirements imposed on it by virtue of its international aspect that are not imposed on domestic aviation. And so it may not entirely be true that you're just looking at the international sector, that even now we are talking about imposing more requirements in the way of paperwork on the satellite launcher than we are on the international aviation industry.

It may be premature to be discussing this at this point because, once we have had a chance to sit down with our sister agencies in the context of the interagency group, have had a chance to look at the requirements that apply, that, of course, will be an important

target of our effort. If it turns out that we're imposing unreasonable, excessive, and useless requirements on the ELV industry, then, of course, it will be an important target of ours to reduce those requirements.

Mr. WALKER. Well, I didn't want the record to reflect purely—an intent on the part of this subcommittee—at least on the part of this member—that that's necessarily the—best idea that we—regulate within an inch of their life everything that commercial people decide to launch now and in the future. That seemed to be implicit in the chairman's question that this is something that we just assume has to be done. We have have to do it under treaty obligations. That's something I'd want to study. But I wouldn't want to start from that assumption.

Mr. SHANE. No. Congressman, the entire thrust of——

Secretary DOLE. It's just the opposite.

Mr. SHANE [continuing]. The appointment of the lead agency and the entire effort that we are about to undertake is 180 degrees in the opposite direction.

Mr. WALKER. I thank you. I thank you.

Secretary DOLE. Right. And I would—I would just add to that that this is a discrete industry. I do not think it should be viewed as an offshoot of the aircraft industry. In other words, this is discrete. It would be a totally separate review. Therefore, the regulations that might apply in one instance, I don't think should be automatically transferred in this area. It is a discrete area.

The certification of aircraft, for example, I do not see that that—I think it would be unlikely that certification of vehicles would be necessary unless there is a compelling reason. So the thrust, as Jeff says, is completely the opposite, to remove regulations unless they are necessary, the minimal regulations, safety, and so on.

Mr. WALKER. I thank the gentleman for yielding. He's been most generous.

Mr. VOLKMER. All right, gentlemen. I do have several more questions. Before I go on, I want to welcome here also Congressman Dan Akaka of Hawaii, who is the principal sponsor of the legislation, and who started this whole process for the commercialization process, here to the subcommittee.

Getting back to this question of licensing. Along with that, in the event we have a commercial operator of a vehicle that wishes to use presently Government-owned launch services at Cape Canaveral, how would you envision setting up the fee for the use of that? Would that make a sole determination, or would you work with people like DOT and NASA or the Air Force on making that determination as to the costs that are to be charged for that?

Secretary DOLE. I think that's certainly something that we would want to work with the others through the interagency review board to establish, Mr. Chairman. And the intent would be to balance our established policy of relying on user fees to offset the costs of necessary Government services and our objective of promoting the growth and the full potential of this industry. So that's something that would have to be focused on very carefully by the agencies involved.

Mr. VOLKMER. There are some who have proposed that GAO could be involved as maybe—basically as an arbitrator as to an ob-

jective determination as to these costs. I'm trying to make a little more—I'd appreciate it if you'd even think about that.

Mr. LUJAN. Would the gentleman yield?

Mr. VOLKMER. Yes.

Mr. LUJAN. I hope this isn't taking us in the direction that we've gone in this committee before, and that is the competition that the ELV's will provide for the shuttle if ELV transportation is inexpensive as compared to the shuttle. There's been some discussion within the committee—and I would hate to see it come to that perhaps by charging more for the use of the facilities, it would make ELV's more expensive, so that they are really a serious cost competition to the shuttle, to grant some sort of protection to the shuttle system by being sure that the ELV's are not priced much, much lower than the shuttle.

I think that's——

Secretary DOLE. Yes.

Mr. LUJAN [continuing]. That's one of the things that you'll have to be looking. Certainly no one wants to hurt the shuttle effort.

Secretary DOLE. Right.

Mr. LUJAN. But, by the same token, at least this member doesn't want us to artificially keep ELV prices high simply so that they will not be a serious competition to the shuttle. And I think that's going to be one of the discussions that's going to be——

Secretary DOLE. Yes.

Mr. LUJAN [continuing] Perhaps going on, and some determination made as to the national interest.

Secretary DOLE. Right.

Mr. VOLKMER. To continue on that—with that, though, and Government service argues—first, we are going to need a license, I assume. Maybe I ought to go back to that first. You are going to need a license to—for launch platforms, right? You are going to need a license basically for the type of launch vehicle, and then, third payloads. Do you envision that?

Mr. SHANE. That's correct, Mr. Chairman.

Mr. VOLKMER. All right.

And if Government launch services are available, those won't necessarily have to use the same licensing process because those have already been used, and successfully, for years?

Mr. SHANE. That's right.

Mr. VOLKMER. You correct on that. But you have the question there of reimbursement to the Government.

Now, do you envision that, in the—your role as lead agency, that you would have final say as to what those reimbursable costs will be?

Mr. SHANE. Mr. Chairman, I don't think we would have the final say, as we would not, as the lead agency under the scenario we've outlined, have the final say over any aspect of the launch business.

We envision what, in the best of all worlds, would be a cooperative process where we, again, with the moral authority that we have as lead agency, and the responsibility, a clearly defined responsibility, for encouraging and facilitating this new industry, be able to go to the other agencies in the process—whether it's over a pricing issue or a certification issue or an exemption or anything else—and insure that we are able formulating and implementing

policies that are not providing—or creating artificial constraints on an important new element of the private sector. That is our responsibility.

And if it were pricing, we would handle it, I assume, in exactly the same way we handle all others.

Secretary DOLE. Right.

Mr. VOLKMER. So what we're saying is if they were going to use a U.S. Air Force facility at Cape Canaveral, that the U.S. Air Force would determine the amount of reimbursable costs, not only for the using of the platform, but if also for security, and also if they were doing the tracking for that also?

Mr. SHANE. Yes. They would, in the first instance, determine those costs. Now, as lead agency, we are holding ourselves out to the private sector, to the commercial ELV operator, a sympathetic ear. If those costs are deemed unreasonable by the operator, if he finds that he's got plenty of trouble competing with the shuttle already, simply because the shuttle has so many unique capabilities that it's pretty difficult to try to match with a private sector operation, and he also has now a different constraint in the form of pricing that he feels is too difficult to meet, he will come to the Department of Transportation under this regime, and the Department of Transportation, as lead agency, will then act as a broker in his behalf trying to determine whether or not those prices are, in fact, unreasonable, and sit down with both the applicant and the agency, the Department of Defense in your example, it would be DOD—and try to work out a reasonable accommodation.

If it turns out that there is no resolving the dispute amicably, if the applicant and the pricing agency are ultimately at loggerheads, it may be necessary ultimately to go to higher authority. And, as lead agency, it would be our responsibility to identify those opportunities for a higher level resolution where it turns out that we simply have a major problem that we simply can't resolve on a lateral basis with our sister agency.

Those would be few and far between, though, on the basis of the expressions of support that we've had from all of the other agencies that are in the process.

Mr. VOLKMER. So, what we're look forward to is not only then what I see—or hearing, is that you would not even for Cape Canaveral license the actual launch services. That would would have to be determined again by DOD——

Mr. SHANE. The launch——

Mr. VOLKMER [continuing]. The landing of it, the date of it, everything else.

Mr. SHANE. Yes.

Secretary DOLE. Right.

Mr. SHANE. As lead agency, we would be overseeing both the basic mission approval—and the Secretary has described the elements of that—as well as the specific launch approval, it was whether from a national range, existing in DOD or NASA facilities, or a commercial range. If we're talking about a national range, then we do have a system in place. It is at that point a question of insuring that the system is being managed as efficiently as possible for the benefit of the private ELV operator.

Mr. VOLKMER. Do you envision that the application—well, first, let's just take a launch vehicle application. Let's say on that part of it that that application could envision not just one launch vehicle, but many of one of a kind. In other words, if an application proposes to manufacture and use or sell for use 100 of these, would that have to have each one a separate license, or would have you have one license basically for all?

Secretary DOLE. Mr. Chairman, if you had, several launches involving identical launch vehicles and payloads within a fairly short period of time, I see no reason why one license or one set of approvals would not apply across the board to all of them in that instance.

Mr. VOLKMER. But if you had separate payload and differing payloads, you would have to have, surely, a separate license for the differing types of payloads.

Secretary DOLE. Right. It would be different missions in that instance.

Mr. VOLKMER. Do you see any—or envision that payloads would not ever be licensed, any type of payload would not need a license? Communication?

Secretary DOLE. We don't foresee it right now. But, you know, a lot of these matters need to be worked out with the other agencies involved.

For example, the last comment that I made about the three separate launches and requiring only one license, that is my view, that's the view of DOT. But I think that it's important that we—our interagency review board—have an opportunity to reflect on the kinds of questions that you're raising today, that it's important to have input on this.

Mr. VOLKMER. All right.

At the present time, the Federal Government really doesn't regulate insurance and insurance industries and how much people have to have on insurance. But, you know, we are having requirements because of the fact that, under international agreements, anything launched from this country or by people from this country, we have liability, so there are insurance requirements.

Are you going to take it upon DOT itself to make that determination on the amount on each launch?

Secretary DOLE. Well, of course, financial responsibility is going to be critical to the industry, and we do anticipate that insurance will be required to indemnify for damages that are caused by commercial ELV's.

We have not yet determined what form of insurance that would be. And, again, I think that this is something that will have to be worked out as we go forward to set up the mechanism and to address these specific issues.

Mr. VOLKMER. But that's something that basically you could do inhouse, is it not? You can do it with other agencies, but it's a determination that you can make.

Secretary DOLE. Yes.

Mr. VOLKMER. There's no—there's no licensing agency at the present time for that.

Secretary DOLE. I think that that's something that we may well want to do. That has not really been determined.

Mr. LUJAN. You'd do that—excuse me, Mr. Chairman, if you would yield—you—you'd do that, you would require certain insurance of airlines?

Secretary DOLE. Actually CAB.

Mr. LUJAN. Yes; and in the nuclear business, we do that for reactors.

Secretary DOLE. Yes.

Mr. LUJAN. So there's a lot of present——

Secretary DOLE. Well, I think—I think it's something we may well want to do. The CAB would provide it for the airlines. But it's certainly a function we may well want to do right at DOT. That's right. It's just not resolved today.

Mr. SHANE. At the present time, Congressman, even in the case of the few launches that we've had on the commercial side, there have been insurance requirements imposed but, in this case, by the FAA in its exemption orders. So there is an insurance requirement within the complex of authorizations already available to the industry. How we include an insurance requirement in a more rationalized, streamlined process that we're looking to is something that just hasn't been determined yet.

Mr. VOLKMER. All right. Now, who is going to actually enforce the requirements of the license? In other words, if it's a conditional licensee and provides—and you issue a license to him that he'll make a launch on such-and-such date and, for some reason, it doesn't occur, and then he decides, well, he's just going ahead and set it off 2 weeks later.

Secretary DOLE. It would be enforced by the departments and agencies whose regulations are applicable.

Mr. VOLKMER. Only then—that one then would enforce it?

Secretary DOLE. We would monitor, certainly, as the chair of the interagency review board, but we do foresee that those whose regulatory responsibilities are involved would provide the enforcement.

Mr. VOLKMER. Then we—I think we all should at the question then of whether the other agencies presently have legal authority to enforce these type of requirements as against private persons, private corporations, or who will be the licensees.

Secretary DOLE. Yes.

Mr. VOLKMER. I think we're going to have to look at that.

Secretary DOLE. That's certainly something we anticipate.

Mr. VOLKMER. Does the gentleman from Virginia have any additional questions?

Mr. BATEMAN. Yes, Mr. Chairman.

If I may, as a preliminary to another question, I'd like to make sure I have a proper understanding of what the decisionmaking process within the administration has been. As I understand it, initially, SIG said either one of two agencies would be the appropriate lead agency, Commerce or Transportation. From there, it went to the Cabinet Council for deliberations as to which of the two would be preferable, and the committee has wanted very much to know what that determination was.

Am I correct that the Cabinet Council then voted that it should be the Department of Transportation, and that was a vote and the basis of a recommendation made to the President, and then the President——

Secretary DOLE. No, sir.

Mr. BATEMAN [continuing]. Accepted that recommendation?

Secretary DOLE. No, that's not the way it happened. Actually, there was not a vote of the Cabinet Council. The Cabinet Council was convened with the President to discuss the matter, and both Secretary Baldrige and I did make presentations as to how we felt our departments could contribute to this process. And there was debate and discussion with the President and the members of the Cabinet Council on Commerce and Trade, and then the President made the decision.

Mr. BATEMAN. I see. So there was no vote as such?

Secretary DOLE. No.

Mr. BATEMAN. There was just a meeting where——

Secretary DOLE. That's right.

Mr. BATEMAN [continuing]. The whole matter was aired extensively, and then the President made a decision?

Secretary DOLE. That's right.

Mr. BATEMAN. That was really a predicate for my further question.

In your written statement and in the comments that I've heard this morning, the decision seems to carry with it the notion that certain structural changes, so to speak, in the proposed legislation itself should be made. Was the decision that the Department of Transportation be the lead agency made in a particular context of how the bill should ultimately be structured and drafted?

Secretary DOLE. Well, the administration has not necessarily felt that legislation would be necessary.

Mr. BATEMAN. Which brings me to my further question, but go ahead, if you would.

Secretary DOLE. Well, therefore, it was a matter of—basically, the rationale for the decision was that the Department of Transportation, as a deregulator, and a Department that understands the regulatory process by being involved in it and having been in the lead with deregulating railroads, airlines, and so on, would be uniquely suited to what is the most important activity to the industry right now, and that is to remove regulatory barriers and to streamline those minimal regulations that are felt to be necessary—in the area of safety, for example. That was really the rationale of the decision.

As far as the legislation is concerned, as I say, we've not felt necessarily that legislation was needed. Of course, an executive order is being prepared right now. And our major concern has been with the transferring of responsibility to one agency rather than relying on the expertise that's already developed in the existing agencies and departments and their enforcement mechanisms.

Mr. BATEMAN. Mr. Chairman, there may be such a document or statement. But if there is, I haven't really focused upon it. But it would be very useful to this member if we were to have a document that proceeded on an assumption that H.R. 3942—obviously, it is now law and, for purposes of the assumption, would not be the law—and that further, some citizen or corporation wanted to put something in space to accomplish a given purpose or function or to acquire certain types of data, taking that as a premise and perhaps

putting some specifics as to one of the obvious potential reasons someone would want to do this.

I'd like to see an inventory of what are the impediments in the absence of H.R. 3942 to that citizen or corporation doing whatever it is he wants to do.

Secretary DOLE. Yes.

Mr. BATEMAN. If I have the money and I have or accumulate the expertise to build my own launch vehicle, my—develop my own payload——

Secretary DOLE. Yes.

Mr. BATEMAN [continuing]. Do all of those things, what stops me under present law from doing my thing, whatever it might be?

Secretary DOLE. All right. We'll be glad to provide that. Surely.

Mr. BATEMAN. I would like to see that inventory——

Secretary DOLE. Yes.

Mr. BATEMAN [continuing]. And references to each of the statutory or regulatory provisions that are germane or which raise an impediment.

I am not saying there shouldn't be some impediments. I rather strongly suspect there should be some. But I'd like to have the inventory of what precisely they are.

Secretary DOLE. Fine. I'd be happy to provide that.

And, of course, we will very soon, as we convene the interagency working group, begin to look at those regulatory matters ourselves in terms of where there may be barriers to this industry.

And let me just say that I am very anxious to work with this committee to explore the need for legislation. As I say, we have not necessarily felt that legislation would be necessary, but we certainly want to work with you to explore all aspects of possible legislation.

Mr. BATEMAN. Well, Mr. Chairman, I would think that we need that kind of presentation early—not late—and as early as possible——

Secretary DOLE. Fine.

Mr. BATEMAN [continuing]. Because it would seem to me that, when we have that, we not only have a better feel for how necessary H.R. 3942 is—and it seems to me that it—it—I'm starting with a premise that it is necessary—and if necessary, we want it to be as effective as possible to accomplish the purposes of commercialization in a context where the public interest is protected.

Mr. VOLKMER. If the gentleman wouldn't mind my interrupting, because we do have—as I understand it, the Secretary has to leave in a little, in a few minutes?

Secretary DOLE. Yes.

Mr. BATEMAN. That concludes all my——

Mr. VOLKMER. We do have some more questions.

I'd just like to comment that we've had testimony, and I think the record has been already typed up, and you may review the statement of Mr. Hanna earlier this spring who testified as to the impediments that they had to send the Conestoga up in the air down in Texas. So if the gentleman wants to review that, I'm sure——

Mr. BATEMAN. I would like—I will review it myself, if that is in existence. And I had lost sight of the fact it was.

Mr. VOLKMER. Well, it's—oh, yes, it's on the record.

Mr. BATEMAN. But I would like for Secretary Dole to review it and to critique it as to its correctness and completeness.

Mr. VOLKMER. At this time, I recognize the gentleman from Hawaii for questions he has.

Mr. AKAKA. Thank you very much, Mr. Chairman.

Madam Secretary, I'm delighted in the interest the administration has in this effort and participating in launching a new industry for a country which really is—will be playing a big part in the history of our country and the world.

In your testimony, you point out that H.R. 3942 could be counterproductive, could be too descriptive in detail.

My question may be two questions is: Are you saying that the lead agency should not be a strong lead agency that would bring about coordination? And I ask that question, too, as you point out here, that centralization of all functions in a single agency might impede progress.

My concern is—and the question is how strong are you looking at your lead, is that what——

Secretary DOLE. I think there should be a very strong lead agency. And I think it's a matter of coordinating, facilitating, really providing the leadership to establish a mechanism, a lean mechanism; a very thoughtfully, intelligently, considered mechanism which will expedite the authorizations necessary for this fledgling industry to grow and to really realize its potential.

I do see it as that kind of role, not as taking under its roof all of the functions of all of the other departments and agencies that are involved.

I think the kind of genuine technical expertise and credibility that would be necessary would take far too long. That's what I mean by being counterproductive to the process. Because when you look at the list of agencies involved in approving the launches and you see the long list that we referred to earlier, I don't see how it could work effectively to transfer that kind of authority to the one agency because of the necessity of developing the expertise and the credibility in all of those areas.

Therefore, I do see it as a strong coordinating and facilitating role. I feel that the Department of Transportation is in a position to work very effectively with its sister agencies and departments.

For example, with NASA, we are involved in aeronautical research with NASA. There is a very close and very good working relationship. And that holds true throughout these various departments. But I would think it would be very difficult to imagine the actual functions being transferred in a way that you would have credibility and the kind of expertise you need quickly.

Mr. AKAKA. There are two other agencies that I think of when you mentioned agencies. And I don't know whether you mentioned it earlier, and one of them is EPA and——

Secretary DOLE. Yes.

Mr. AKAKA [continuing]. The other is OSHA——

Secretary DOLE. That's right. Both of them are involved.

Mr. AKAKA [continuing]. That would come to play in this——

Secretary DOLE. That's right.

Yes, as a matter of fact, just to go down that list again very quickly. Three of the agencies are within the Department of Transportation now, which is another of the reasons that it was felt that DOT would be a good lead agency because the FAA, the Coast Guard, and the Materials Transportation Bureau are all within DOT.

Then you have the FCC, the EPA, OSHA, NASA, DOD, State Department, Commerce, CIA, and ACDA as far as arms control agreements are concerned. And that's—that's the concern that we have had about actually transferring those kinds of responsibilities to one agency. It is very broad.

Mr. AKAKA. As you probably know, one of my deep concerns and the reason why I've done what I did in putting this together is the concern of—and you mention here—it here as a one-stop——

Secretary DOLE. That's right.

Mr. AKAKA [continuing]. Agency. And my concern at the beginning of all of this was the time it took——

Secretary DOLE. Yes.

Mr. AKAKA [continuing]. In a company to get all the permits that is needed to launch a vehicle.

My question to you now, as you mention these agencies and as your role as the lead agency, would you have an idea of how long it would take with your agency as the lead agency, to acquire a permit?

Secretary DOLE. I would hope and, again, this is without having had the opportunity to sit down with the other agencies since it's been less than 48 hours that we received the nod on this. But I would hope that it could be done in less than 6 months' time.

I think that that's something that has to be worked out, though, as we determine the process, as we streamline the process, and factored deadlines into it. And perhaps it could be done in less time than that, but certainly no longer, I would hope.

Mr. AKAKA. Yes. Thank you for the two questions but may I make a last comment? And that is that I hope that you can get back to us and tell us that it will take less than 6 months.

Secretary DOLE. I hope so, too. I agree with you.

Mr. VOLKMER. I just want to say, you just tell us when you have to go because I know there are—the gentleman from Pennsylvania has additional questions and he hasn't even taken his 5 minutes yet. But do you have to leave right now?

Secretary DOLE. For a 1 o'clock appointment, so——

Mr. VOLKMER. Can you make it very brief?

Mr. WALKER. Yes, I——

Mr. VOLKMER. Then if we have additional questions we will hold the record open and submit them in writing——

Secretary DOLE. Fine.

Mr. VOLKMER [continuing]. And you can supply the answers.

Mr. WALKER. My question is—will be more in the form of a statement, I suppose, because the Secretary is aware that I had some reservations about DOT being designated as the lead agency.

And I want to say that those reservations were not based upon DOT's competence to do the job. I think that I—you are probably the most competent part of the Federal establishment to do the job with regard to ELV's.

My reservations stem from the fact that I am concerned that the administration has taken the first step toward saying that we are going to make all commercialization decisions on a case-by-case basis—that we are going to determine that this agency is the most competent to handle ELV's but when it comes to electrophoresis and with regard to a—pharmaceuticals, FDA may be the most competent there. And so, therefore, we will assign that there. That we will decide on something like crystalization—that kind of commercial activity might better be in Commerce and so, therefore, we will put it there.

What that will tend to do is stifle the innovation in the industry because what every innovative idea will realize at the outset is that they will have to get a lead agency determine for them before they can begin to move toward commercializing that particular idea. And that bothers me, because I think that that could end up hindering commercialization, stifling the ability to commercialize.

So what I do welcome in your statement is the fact that you recognize that this regulatory nightmare that people have to go through has to be reduced and that we have got to move in a direction in ELV's and in all other parts of commercialization toward reducing that.

I hope you also realize that there's going to be some intransigence on the part of Washington and on the part of this Congress on some of those issues. We tend here in the Congress, every time one of these issues comes up, to start talking about licensing procedures, and how much—and how much detail are we going to require this to be done, and all of that. What in fact we ought to do is be figuring out exactly how we can allow this to happen without putting too much of a regulatory overload on it.

I welcome in your statement that you seem to be moving in that direction. And I would also echo that the statement of my distinguished colleague from Hawaii, I hope we are nowhere close to 6 months in the time it takes to get a license done.

I would hope that we would develop a licensing procedure on this that would allow these people the hope that in a matter of a couple of weeks they could get a turnaround on these matters. Because I think it is extremely important if they are going to say that there is a—that we can fly a payload, that we can fly that payload as quickly as possible.

So I realize that in looking at the matter initially that you've got to look in a matter of months. But I would hope that we are aiming toward a process that will assure someone that comes through the door that a couple of weeks later they can be back out the door with the license that they need to fly their mission.

Secretary DOLE. Well, I would certainly hope so too. I think it would depend on the complexity, obviously, of what is presented to you. But it would be my goal to have a streamlined process that's just as efficient and effective as it can be which would provide for a quick turnaround in those cases where that's possible. And then if it's a more complex case, I would hope certainly no longer than the 6 months. But, really, I hesitate to even say that because we have not even had a chance to convene the—coordinating the interagency committee at this point, and that is an outside estimate.

Mr. WALKER. We will await with a great deal of anxiety the determination as to how long that might be.

Secretary DOLE. Right.

Mr. WALKER. We will be anxious to hear the results.

Secretary DOLE. I want to reassure you, too, that we are looking at this systematically, not in a case—on a case-by-case basis; but rather looking at the system, and trying to set up a procedure through the interagency review board that will be able to approach it in a systematic way.

Mr. WALKER. Thank you, Mr. Chairman.

Mr. VOLKMER. The gentleman from New Mexico.

Mr. LUJAN. Just one really quick. You are being awfully nice and you—about the lead agency and the coordinating role that you will take. But as you can sense the frustration—what we really want you to say is we are going to bash heads in order to get this thing done quickly; and approach it with that attitude. At least—that's—that, I think, is what the committee is really waiting for.

Secretary DOLE. Well, let me assure you that everything will be done that is necessary to achieve the goal. You don't have to fear. And we will certainly be aggressive about setting the system in place and then coordinating and working with the agencies and departments to achieve the goal.

Mr. VOLKMER. And I would like to make one final statement, and that is as chairman of the subcommittee, I plan to continue on with 3942. And I look forward to working with you and others in the administrative branch so that hopefully we can work out legislation that will promote, facilitate, the ELV's commercialization of space.

I hope we don't get into a position where we are antagonistic in any way on positions that we are able to work together on it. And I look forward to that and hopefully it can be done.

And another thing that I would like to just comment is that I'm sure that probably by the time we get back and be able to do anything on this until the last of January, first of February, hopefully the Executive order will probably be formulated and——

Secretary DOLE. Yes.

Mr. VOLKMER [continuing]. That taken care of and we can all look at that and see how that works with the legislation. And in that regard I would like to say, as you know, legislation goes through a lengthy process to once become law, it takes a long time to make changes in it. But, on the other hand, one thing I always find that I disagree with on Executive orders is that it takes a stroke of a pen or one man, and it can all be undone, and all be changed. You can't do it if it's in the law that way. So that's why I see the need for legislation.

Secretary DOLE. Well, we certainly look forward to working closely with you.

Mr. VOLKMER. I thank you very, very much for being here and——

Secretary DOLE. Thank you.

Mr. VOLKMER [continuing]. You have been very helpful.

Secretary DOLE. Thank you.

Mr. VOLKMER. The subcommittee is adjourned.

[Whereupon, at 12:50 p.m., the subcommittee was adjourned.]

THE EXPENDABLE LAUNCH VEHICLE COMMERCIALIZATION ACT

THURSDAY, MARCH 29, 1984

HOUSE OF REPRESENTATIVES,
COMMITTEE ON SCIENCE AND TECHNOLOGY,
SUBCOMMITTEE ON SPACE SCIENCE AND APPLICATIONS,
Washington, DC.

The subcommittee met, pursuant to notice, at 1:30 p.m., in room 2325, Rayburn House Office Building, Hon. Harold L. Volkmer (chairman of the subcommittee) presiding.

Present: Representatives Volkmer, Bill Nelson, and Lujan.

Mr. VOLKMER. The subcommittee will come to order.

The subcommittee convenes to receive testimony on draft legislation dealing with the commercialization of space launch services. This draft legislation was prepared following analysis and hearings on H.R. 3942, the Expendable Launch Vehicle Commercialization Act, conducted by this subcommittee last November.

H.R. 3942, as introduced, was intended to promote and control private commercialization of space launch services by simplifying and expediting the licensing of such activities. The draft legislation embodies this same principle, but departs from H.R. 3942. The draft bill designates the Department of Transportation as the lead agency for ELV commercialization and preserves existing statutory requirements as they relate to launch activities. This new approach differs from H.R. 3942 which would have exempted private space activities from control under existing law, and placed comprehensive regulatory authority in a single agency, the Department of Commerce.

At today's hearing, the administration will present its views on this draft legislation and discuss their plans for promoting and controlling private launch activities. I am pleased to welcome Ms. Jenna Dorn, the newly appointed Director of the Office of Commercial Space Transportation at the Department of Transportation, who will present these views on behalf of the administration.

I also want to welcome Mr. Otho Eskin from the Office of Advanced Technology at the State Department who is here today to discuss the issue of payloads being launched on private launch vehicles. This is an issue of particular concern to the subcommittee because of the safety, national security, and foreign policy concerns.

Before we proceed to hear testimony, I would like to make some additional remarks.

Commercialization of space launch services is a goal this subcommittee shares with the administration. The Executive order signed by the President in February designating the Department of Transportation as the lead agency for ELV commercialization was a positive step that I personally applaud. I have some doubts, however, that this action alone is sufficient to ensure that the goal of commercializing launch services will be achieved.

It is one thing to state policy which, in this case, we are in agreement with the administration. It is quite a different thing to provide the means to carry out that policy. The draft legislation we are considering today represents one means of implementing this policy. It is my hope that we can work with the administration, and with industry, to develop appropriate and effective legislation in this area. That is why we are here today.

I would like at this time to recognize the gentleman from New Mexico, the ranking minority member, for any opening remarks he may wish to make.

Mr. LUJAN. Thank you very much, Mr. Chairman.

As we all know, the President signed an Executive order on commercial ELV activities last month. This was another step in the right direction. The future uses of space will, of course, depend on a strong space transportation system. The shuttle will play a star role in the U.S. space program, especially since it is a manned vehicle capable of returning with payloads. But I strongly believe that the U.S. space program will be stronger by having a commercial ELV capability as well. It is a lot like having both a nice sedan and a four-wheel-drive vehicle in the garage; on a day like today, we might all prefer the four-wheel-drive vehicle, and that's the value of the mixed fleet.

So far there have been only two applications for a commercial ELV launch, but the administration and the committee have both shown their foresight in working to ensure that the approval process will work as smoothly as possible before the demand increases. The activities of the Department of Transportation and other agencies, along with the interest of the committee, should be viewed by the industry as a clear signal of the support for commercial ELV's. However, there is still some question—or perhaps some confusion—whether Congress indeed concurs with the President's policy. For this reason, I feel it is desirable to proceed with legislation on private sector launch vehicles.

I am, however, concerned that by passing this legislation we do indeed not only send a signal of our support to industry, but also that the legislation helps commercialize ELV's. It would be wrong to pass a bill that causes more problems than it solves. I hope the Departments of Transportation and State will be able to discuss with us their views on what should be included in the legislation.

Mr. VOLKMER. Thank you very much.

At this time we will proceed with the hearing. Ms. Dorn, your statement, which you have been so kind as to furnish us, will be made a part of the record in full. You may either review the statement in full or summarize, however you desire.

STATEMENT OF JENNA DORN, DIRECTOR, OFFICE OF COMMERCIAL SPACE TRANSPORTATION, U.S. DEPARTMENT OF TRANSPORTATION

Ms. DORN. Thank you, Mr. Chairman. I'd be happy to summarize this statement which we have presented to you.

It indeed is a pleasure to be here this afternoon, particularly when it's very evident that we share the important common goal of private sector involvement in transportation to space using expendable launch vehicles. I send greetings from Secretary Dole; she is deeply appreciative of the priority attention that you, Mr. Chairman, and Mr. Lujan have given to this important effort. In fact, it was the early interest and leadership of this committee and Representative Akaka which focused administration efforts and led to a declaration of policy by the President last year encouraging private sector ELV's. We viewed this effort as a complement to the Government's space transportation system which, as we all recognize, makes a tremendous contribution to research and development in space combined with what we believe to be a very important effort to encourage a thriving, healthy, private transportation option. America will surely preserve its place as a leader on this frontier.

The policy messages which both of you have mentioned, by the President, have occurred on numerous and significant occasions. I'd just like to briefly summarize those.

On July 4, 1982, President Reagan made it clear that he wanted private enterprise to have a stake in developing the space frontier. The President reemphasized that commitment in his State of the Union Address in January when he observed that the market for space transportation could exceed the Federal Government's capacity to provide it. He again made it clear that his policies would recognize the need of private companies interested in putting payloads in space to have ready access to private sector launch services.

Again last month, the President issued Executive Order 12465, designating the Department of Transportation as the lead agency to carry out this mandate. In fact, the lead agency concept, as you well know, is directly traceable to Representative Akaka's ELV bill.

If I could just take a moment to review the progress and the activities that this office has been engaged in under the direction of the Executive order when it was signed, approximately 5 weeks ago.

As you know, the Secretary created an Office of Commercial Space Transportation which reports directly to her and is housed in her immediate office. This office has quickly become the focal point for Government and industry contact regarding ELV's, and it's been indeed a pleasure to see the amount of interest and activity that's been expressed by the private sector in this initiative, even in the few short months that we have been assigned as the lead agency. I think it's a good indication of where this industry could go and the amount of interest in the endeavor.

The staff of the Office of Commercial Space Transportation has been actively involved in implementing the Department's charter to encourage, facilitate, and coordinate activities related to the commercialization of ELV's. And included in the kinds of tasks we

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have undergone have been a review of regulations of other agencies and the process by which these approvals—and as Mr. Lujan mentioned, the U.S. Government has had only two prototype launches to date—those reviews have been undergone in order to determine what kinds of regulations are required.

We have also undergone a number of meetings with all aspects of the industry to identify the potential barriers. We talked to one aspect of the industry; they may have a particular point of view as to problems that they have encountered. And we talk to the investment community or the insurance community, and they yet have a different perspective.

We have also engaged in extensive discussions with Government agencies involved in space. And I must say here that our job has been made far easier by the high level of interest in the endeavor all throughout the ranks of Government, from the top on down, as it were. We have been pleased at the intense cooperation on the part of NASA, Departments of State, Commerce, Defense, and the Trade Representatives' Office, and they've all been very cooperative in this effort. And in fact, I might add that they've been even eager to participate in what many view as an exciting step forward in making space transportation just another mode of transportation.

As I mentioned, because neither the Government nor industry has had experience in private sector ELV launch operations and their regulations, this really has been a complex and, in fact, time-consuming effort. We took as one of our first tasks the systematic investigation of the legal and operational issues that could affect commercial ELV's, and what we've discovered—which is something that the committee has been aware of for some months—is that there are no shortages of unanswered questions or complicated issues.

While the Federal Government has responded, at least initially, with great caution—and I might say, appropriately so—in reviewing the requests for commercial ELV operations, part of their concern stemmed, I believe, from the lack of a focal point in the Government who really could help coordinate the effort to ensure that all the legitimate Government needs are being met. And I think that with the beginning of a lead agency approach, that this has helped establish a level of confidence among other agencies that there is a coordinative mechanism that can, in effect, help streamline the process for private industry.

The key, we've discovered, is really flexibility. We agree with the widely held view that a flexible and creative posture on the part of the Federal Government will be required to be helpful.

Precisely what the industry seeks is what we believe the Executive order can help provide, and that is the certainty and predictability from the Government. If they are unable to convince the investment community of the worth of their potential investment, they must indeed be convinced that the Government is supportive, is going to have predictable policies with respect to its encouragement for private sector ELV's.

I have become convinced, in the few short weeks of our assignment, that at this point the primary problem does not appear that there are too many agencies involved with this industry, but rather

that there are few internal agency processes designed—and in fact, interagency processes—which are designed specifically for the unique needs of private sector ELV launches. Each role we have identified for various agencies appears to be appropriate, although not specifically designed for the function which we are to perform.

Thus we have discovered that our approach, appropriately, to this problem has become a process-oriented one. We have found that the technical issues are really the more straightforward and easier issues to address. We have a huge number of experts within the Government, including NASA, DOT, FAA, Coast Guard, Materials Transportation Bureau, the Defense Department, who represent an accumulated expertise and experience that are ready and willing to grapple with and resolve the technical issues. Providing a workable and streamlined Government system for responding to license requests requires a different kind of talent, and we believe that it's precisely the kind of talent, process-oriented, deregulation-oriented, that DOT has to offer.

I would like to just talk briefly about our first hands-on experience which has been to facilitate the Federal approval process. I think it's appropriate to discuss the Starstruck application; not because it will be duplicated in every respect for future launches, but rather, it's the only real prototype other than the SSI launch, which we have to offer. I think that while there are some differences, it's worthwhile to focus on a couple of key things.

Our ability at the Department of Transportation to help sort through the requirements not only helps Starstruck, but I think it helped us ultimately in the Government to shape our ideas and our recommendations about the problems and potential barriers that are out there. We also did an extensive debriefing by Space Services, Inc., the other private sector company to undertake a launch, regarding its own experience in obtaining a Federal launch approval.

I think this illustrates to us that a very important principle is that it's a necessary, informal, interagency process that must be used when agencies have legitimate public policy functions to perform which may or may not be space related.

As you know, Starstruck is using a unique launching method—towing its ELV out into the Pacific for a launch from the ocean surface in international waters, about 90 miles from the shore, I believe. When Starstruck encountered difficulties with local port authorities, for example, we were able to request Coast Guard assistance immediately. The Coast Guard was able to convene the parties to address all matters of port safety, in which it is indeed the expert, and to offer escort services through the port. This helped satisfy the local officials.

Starstruck also decided that it needed to move its launch area closer to the U.S. coastline, which meant changing the surface and air space that had to be cleared by Coast Guard and by FAA, and the Department of Defense. Our ability to call on the FAA's good offices and to coordinate the reviews by all these agencies helped out again. And in the negotiation process for the launch approval, I might add, it was a day-to-day management-type coordinative-type experience, that we found it was almost on a daily basis that we

were dealing with the Department of Defense and the FAA and the industry itself in order to smooth the way.

When Starstruck met resistance from the officials of one California town through which it needed to ship its vehicle, the Materials Transportation Bureau—which, as you know, is a part of the Department of Transportation—assured the town that it would not be hazardous and that it would not harm any national security or safety interests. This satisfied the local officials; so again, it was that informal basis on which we were able to solve the problem.

As a general matter, whenever an approval was being delayed unnecessarily, we were able to exercise our responsibility under the Executive order to intervene and to raise the priority of the review being conducted. Having a lead agency really helped, and I'm convinced that it can do so in the future, as well.

These experiences have taught us that we must avoid, in our view at all costs, an attempt to reduce regulation to a single, all-encompassing procedure designed to meet all potential situations. That could well thwart the precise goal which this committee, and I know this administration, are seeking. And of course, it would be impossible to foresee all the possible impediments confronting just the single Starstruck launch; so as this industry emerges and grows, with new technology and innovations coming at a very rapid pace, I think we run into a tremendous risk by trying to prescribe or predict the kinds of potential problems that are out there.

In other words, what we are saying is that we felt we needed responsiveness rather than regulation in most cases; and in the near term, at least, not even the industry knows what it needs in the way of regulatory arrangements to suit all the situations, and that flexibility must be retained while we gain experience and the industry grows. I think that that can happen.

I am optimistic about the streamlining and about the workability of the process, and we recognize that there may be problems. But in our view, the problems to date have not been created by regulation. Experience, served as the prototype, will guide our development of recommendations for the streamlining of regulation. We recognize that there are different sets of issues for different aspects of the industry; some existing technologies who wish to use national ranges, other new technologies who wish to use commercial ranges.

We already see three techniques which could simplify and shorten the Federal approval process: reduction or elimination of sequential coordination. Instead of waiting for one agency to view and then pass on information, and thus causing delays, we can, we believe, through a streamlining process, have a simultaneous review.

We can eliminate some duplication of the review through voluntary reliance of one agency on another agency's point of view. In Starstruck, for example, NASA and FAA did safety reviews. Now, it could well be in another situation that one or the other do that review, or one agency do one part of the review and another agency do another part, whichever is appropriate to the particular needs of that launch.

In addition, specification in advance by each agency of its information requirements is very important. And, Mr. Chairman, we

anticipate that by June 1 we will be able to give to the industry that list of general information requirements which we hope to have culled down to a reasonable list and a nonduplicative list, to the industry so that they will have some certainty in the future of the kinds of information they need to provide to the Government.

In addition, we expect to convene the interagency group established by the Executive order when it is useful to bring to bear the agencies' accumulated expertise. We expect that we will do that within the next month because we plan to discuss the results of our review of regulation and preliminary plans for licensing approval process.

I would also like to briefly summarize the progress we have made in other areas under the Executive order. You are aware, I believe, that the Department of Transportation and the Department of State are already discussing the possibility of shifting launch approvals for launch vehicles and payloads now handled by State through the ITAR process to DOT as the lead agency. Now, as you know that ITAR process was originally designed to control exports from one country to another. In order to meet a very legitimate public policy concern having to do with the private sector launch from a commercial site, that process was geared by defining an export as a launch. Since we have been designated as the focal point for coordinating the approvals, it may now be helpful for DOT to perform this function which, indeed, is a coordinative one; and we believe we'll be able to streamline it simply because it is our responsibility to serve as the lead agency. And that, indeed, could be helpful. But this would be—and I would like to make that very clear—it would be in a manner that would not affect the State Department's existing responsibilities in international treaty compliance or exports from—in the traditional sense, from one country to another. Our two departments hope to have more concrete information for your committee shortly on this issue.

In the area of frequency allocation, we have convened a meeting of the five ELV launch firms, the Federal Communications Commission, and the National Telecommunications and Information Administration to discuss frequency needs and potential problems. Solutions for frequency needs in the short term, I believe, were satisfactorily addressed as well as the actions needed in the long term.

We are also working with the State and Commerce Departments, the U.S. Trade Representative, and NASA to develop policies to increase the competitiveness of U.S. commercial ELV's in the world market. Our attempt here is to eliminate trade barriers to domestic industries. If the United States is to continue its leadership in space we must indeed permit the private sector the opportunity to compete with ARIANE and other foreign ELV's in order to advance our overall competitiveness.

In the area of commercial and national ranges, we have been working very closely with the Air Force and with NASA on two particular areas. One has to do with launch costs that would be addressed for the private sector user of national ranges, and the other is for use procedures. By that I mean public safety and other kinds of facilities that would be available. We have differing needs here. In terms of the cost, we've been working very closely with the Air Force and it is my understanding that the Air Force has now rec-

ommended a scheme by which direct costs only would be attributed to both private-sector users of the facility, as well as to the Government.

Mr. VOLKMER. Do you mind if I interrupt?

Ms. DORN. Of course not.

Mr. VOLKMER. We're going to have to recess until about a quarter after for a floor vote.

Ms. DORN. Thank you, Mr. Chairman.

[Short recess taken.]

Mr. VOLKMER. The subcommittee will resume sitting and the witness will proceed with testimony.

Ms. DORN. Great. Thank you.

I believe I was mentioning the Secretary's creation of an Industry Advisory Committee, and I'd like to mention that the Secretary personally feels that it is very important to continue what has been a regular dialog with industry because, in fact, what we're doing is charting a new course in private-sector involvement. In order to do that, we must truly rely on private-sector involvement. We anticipate that the membership of that Industry Advisory Committee would not only be the launch service operators, both large and small, existing and new, but also their potential customers and satellite users. The investment community, the insurers, and other space experts in the field—we think it's very important to get a breadth of experience in order to get the kind of dialog we need to get going.

We recognize that there are some members of the committee who have certain concerns with respect to the legislation, and I'd like to briefly touch on that before I close up my remarks.

I cannot stress enough the importance, in the Department of Transportation's view, of the flexibility reflected in the Executive order process in order to define the work of the lead agency. It is too early, in my view, to enact legislation defining this task.

I recognize that there are some members of the committee who have concerns about simply trusting the executive branch to maintain its commitment to encouraging the ELV industry. Congressional interest initiated consideration of this issue, and this committee discussed realignment or enhancement of various authorities, as you mentioned, Mr. Chairman, early on. We respect the analysis and staff work that underlie this viewpoint and do not question that it points to several issues that need to be resolved; however, we still believe it is too soon to choose a legislative course that will sustain this effort in the long term. It may, in fact, have unpredictable and unintended negative consequences.

I would like to address what I believe are several specific concerns of the committee. The first, of course, is whether the executive branch might, by the stroke of the pen or sheer neglect, abandon or water down the ELV commercialization effort. We will not. Secretary Dole understands fully that space transportation is emerging as another routine mode of transportation, and that the Department has a valid and continuing role in its future. She is enthusiastic and personally committed to the task. Also, other departments have great stakes in the future of a commercial ELV industry. For example, the State and Commerce Departments have con-

tinuing interests in the international trade consequences of ELV space transportation.

In short, I firmly believe that the advancement and health of this commercial ELV industry will become increasingly important to the executive branch, and that the confluence of commercial and national interests which have brought the industry to its present stage of development will ensure a high level of Government interest for many administrations to come.

Another concern is DOT's lack of expertise to supplant the normal regulatory process of other agencies in order to speed approval of a commercial ELV launch. As we explain in detail in our comments to you on the bill, we don't believe consolidating the authority of other agencies in a single super agency is practical in any realistic timeframe. Nor will it, in our view, resolve the problems which we to date have identified. In fact, no single agency has the technical depth, long regulatory experience in this context, institutional memory, or other strengths to supplant another agency's judgment, nor should it seek to do so, in our view. Acquiring such expertise and experience by the lead agency would be extremely time consuming and duplicative. We think the approach of the Executive order, stressing procedural gains while relying on existing agency expertise, will yield more benefits far more quickly.

We are indeed enthusiastic about continuing to work on these matters in concert with the committee. Let me assure you, Mr. Chairman, that in our aggressive effort to foster the development of this industry, that if it becomes apparent that a legislative remedy is necessary to resolve a particular problem, that the Secretary will be the first to consult with you and to seek your assistance in a legislative form. She enthusiastically shares your commitment to facilitate opportunities for the ELV industry, for that industry surely can provide an important complement to Government transportation systems for many missions not requiring a manned capability, and those that can be invaluable when users need to place specialized payloads in space when the time, orbit, manifest, or launch window may be unavailable through the shuttle.

We look forward to working on ELV commercialization with the committee in the future as we identify problems that need to be addressed.

I would be happy to answer questions of the committee, Mr. Chairman.

[The prepared statement of Ms. Dorn follows:]

STATEMENT OF JENNA DORN, DIRECTOR, OFFICE OF COMMERCIAL SPACE TRANSPORTATION, U.S. DEPARTMENT OF TRANSPORTATION, BEFORE THE SPACE SCIENCE AND APPLICATIONS SUBCOMMITTEE OF THE HOUSE SCIENCE AND TECHNOLOGY COMMITTEE, MARCH 29, 1984.

MR CHAIRMAN AND MEMBERS OF THE SUBCOMMITTEE:

ON BEHALF OF THE SECRETARY OF TRANSPORTATION, I WOULD LIKE TO THANK YOU AND SENIOR REPUBLICAN MEMBER LUJAN FOR HOLDING HEARINGS ON THIS IMPORTANT ISSUE.

THE EARLY INTEREST AND LEADERSHIP OF THIS COMMITTEE AND REPRESENTATIVE AKAKA FOCUSED ADMINISTRATION EFFORTS THAT LED TO A DECLARATION OF POLICY BY THE PRESIDENT LAST YEAR ENCOURAGING PRIVATE SECTOR ELV'S. DOMESTIC COMMERCIAL ELV'S ARE VIEWED AS A COMPLEMENT TO THE GOVERNMENT'S SPACE TRANSPORTATION SYSTEM. WE EXPECT THAT THE PARTNERSHIP BETWEEN THE PRIVATE SECTOR AND THE FEDERAL GOVERNMENT RESULTING FROM THE PRESIDENT'S POLICY WILL PRODUCE A STRONGER ELV SPACE LAUNCH CAPABILITY FOR THE UNITED STATES.

ON JULY 4, 1982, PRESIDENT REAGAN MADE IT CLEAR THAT HE WANTED PRIVATE ENTERPRISE TO HAVE A STAKE IN DEVELOPING THE SPACE FRONTIER WHEN HE CALLED FOR "AN AGGRESSIVE, FAR-SIGHTED SPACE PROGRAM", INCLUDING PRIVATE-SECTOR INVESTMENT.

THE PRESIDENT RE-EMPHASIZED THAT COMMITMENT IN HIS STATE OF THE UNION ADDRESS IN JANUARY, WHEN HE OBSERVED THAT THE MARKET FOR SPACE TRANSPORTATION COULD EXCEED THE FEDERAL GOVERNMENT'S CAPACITY TO PROVIDE IT. HE MADE IT CLEAR THAT HIS POLICIES WOULD RECOGNIZE THE NEED OF PRIVATE COMPANIES INTERESTED IN PUTTING PAYLOADS IN SPACE TO HAVE READY ACCESS TO PRIVATE-SECTOR LAUNCH SERVICES.

LAST MONTH, THE PRESIDENT ISSUED EXECUTIVE ORDER 12465, DESIGNATING THE DEPARTMENT OF TRANSPORTATION AS THE LEAD AGENCY TO CARRY OUT THIS MANDATE. THE LEAD AGENCY CONCEPT IS DIRECTLY TRACEABLE TO REPRESENTATIVE AKAKA'S ELV BILL, AS TAKEN UP BY THIS SUBCOMMITTEE. I WOULD LIKE TO DESCRIBE FOR YOU THE PROGRESS WE HAVE MADE UNDER THE EXECUTIVE ORDER AND WHY LEGISLATION AT THIS POINT WOULD BE INADVISABLE.

SINCE SECRETARY DOLE APPEARED BEFORE YOU LAST NOVEMBER TO DISCUSS THE LEAD AGENCY ROLE, SHE HAS CREATED AN OFFICE OF COMMERCIAL SPACE TRANSPORTATION, WHICH REPORTS DIRECTLY TO HER. THIS OFFICE HAS QUICKLY BECOME THE FOCAL POINT FOR GOVERNMENT AND INDUSTRY CONTACT REGARDING ELV'S.

SINCE TAKING ON THIS NEW ASSIGNMENT, THE STAFF OF THE OFFICE OF COMMERCIAL SPACE TRANSPORTATION HAS BEEN ACTIVELY INVOLVED IN IMPLEMENTING THE DEPARTMENT'S CHARTER TO ENCOURAGE, FACILITATE, AND COORDINATE ACTIVITIES RELATED TO COMMERCIALIZATION OF ELV'S. WE HAVE ESTABLISHED OUR CONTACTS IN THE INDUSTRY AND IN THE SEVERAL AGENCIES THAT HAVE MAJOR INTERESTS IN SPACE TRANSPORTATION AND LICENSING.

OUR JOB IS BEING MADE EASIER BY THE HIGH LEVEL OF INTEREST AND INVOLVEMENT AMONG SENIOR OFFICIALS IN THE FEDERAL GOVERNMENT. MEMBERS OF THE CABINET AND ADMINISTRATOR BEGGS OF NASA HAVE BEEN QUICK TO MOBILIZE THEIR AGENCIES IN SUPPORT OF THE PRESIDENT'S COMMERCIALIZATION POLICIES. SIMILARLY, THE CAREER STAFFS OF OUR SISTER AGENCIES HAVE ALSO DISPLAYED A HIGH LEVEL OF ENTHUSIASM AND A RESULTS-ORIENTED ATTITUDE. NASA, THE DEPARTMENTS OF STATE, DEFENSE, AND COMMERCE, AND THE TRADE REPRESENTATIVE'S OFFICE HAVE ALL BEEN VERY COOPERATIVE AND HELPFUL IN PROVIDING SUPPORT TO US IN THIS ENDEAVOR.

BECAUSE NEITHER THE GOVERNMENT NOR INDUSTRY HAS HAD EXPERIENCE IN PRIVATE-SECTOR ELV LAUNCH OPERATIONS AND THEIR REGULATION, WE TOOK AS OUR FIRST TASK THE SYSTEMATIC INVESTIGATION OF THE LEGAL AND OPERATIONAL ISSUES THAT COULD AFFECT COMMERCIAL ELV'S. WHAT WE'VE DISCOVERED IS THAT THERE IS NO SHORTAGE OF UNANSWERED QUESTIONS OR COMPLICATED ISSUES.

WHILE THE FEDERAL GOVERNMENT HAS RESPONDED, AT LEAST INITIALLY, WITH GREAT CAUTION IN REVIEWING REQUESTS FOR COMMERCIAL ELV LAUNCH OPERATIONS, THE DESIGNATION OF A LEAD AGENCY WITHIN THE EXECUTIVE BRANCH IS BUILDING CONFIDENCE AMONG THE AGENCIES THAT WE CAN BRING AN APPROPRIATE PERSPECTIVE TO REGULATING THIS DISTINCTIVE, IF NOT UNIQUE, ACTIVITY. COMMENDABLY, THE AGENCIES ARE RELUCTANT TO ESTABLISH POLICY OR REGULATORY FRAMEWORKS THAT COULD UNDULY RESTRICT FUTURE INNOVATIONS BY THE PRIVATE SECTOR TO PROVIDE COMMERCIALLY VIABLE ELV VEHICLES AND SERVICES. WE AGREE WITH THE WIDELY HELD VIEW THAT A FLEXIBLE AND CREATIVE POSTURE ON THE PART OF THE FEDERAL GOVERNMENT WILL BE REQUIRED TO BE HELPFUL. IT IS THE PRESENCE OF THE LEAD AGENCY AND THE PERSPECTIVE IT ALONE CAN BRING THAT WILL ENCOURAGE A SYMPATHETIC CONCERN BY THE REGULATING AGENCIES THEMSELVES.

WHAT WE NEED TO DO, HOWEVER, IS TO ENCOURAGE THE ESTABLISHMENT OF A PREDICTABLE REGULATORY STRUCTURE THAT PROVIDES CERTAINTY FOR THE INDUSTRY WITHOUT STIFLING IT. AT THIS POINT, WE BELIEVE THAT THE PRIMARY PROBLEM IS NOT THAT TOO MANY AGENCIES ARE INVOLVED WITH THIS INDUSTRY, BUT RATHER THAT THERE ARE FEW INTERNAL AGENCY PROCESSES DESIGNED FOR THE UNIQUE NEEDS OF PRIVATE-SECTOR ELV LAUNCHES. THUS, A BALANCE BETWEEN REGULATORY FLEXIBILITY AND PREDICTABILITY IS THE KEY.

OUR APPROACH TO THIS PROBLEM IS "PROCESS-ORIENTED". WE HAVE FOUND THAT THE TECHNICAL ISSUES ARE THE MORE STRAIGHTFORWARD AND EASIER ISSUES TO ADDRESS. NASA, DOT'S FAA, COAST GUARD, AND MTB, THE DEFENSE DEPARTMENT, AND OTHERS ALL REPRESENT ACCUMULATED EXPERTISE AND EXPERIENCE THAT ARE READY AND WILLING TO GRAPPLE WITH AND RESOLVE THE TECHNICAL ISSUES. PROVIDING A WORKABLE AND STREAMLINED GOVERNMENT SYSTEM FOR RESPONDING TO LICENSE REQUESTS REQUIRES A DIFFERENT KIND OF TALENT AND INEVITABLY, BECAUSE THE PROCESS IS RELATIVELY NEW TO THE GOVERNMENT, A "BREAK-IN" PERIOD DEALING WITH ACTUAL PRIVATE-SECTOR REQUESTS.

OUR FIRST "HANDS-ON" EXPERIENCE HAS BEEN TO FACILITATE THE FEDERAL APPROVAL PROCESS FOR STARSTRUCK'S PLANNED LAUNCH. THIS VERY CONCRETE ACCOMPLISHMENT HAS PROVEN INVALUABLE IN SHAPING OUR IDEAS AND RECOMMENDATIONS FOR STREAMLINING THE FEDERAL APPROVAL PROCESS, AND I WOULD THEREFORE LIKE TO ILLUSTRATE SEVERAL ASPECTS OF IT. ALSO, EXTENSIVE "DEBRIEFING" BY SPACE SERVICES, INC, THE OTHER PRIVATE-SECTOR COMPANY TO UNDERTAKE A LAUNCH, REGARDING ITS OWN EXPERIENCE IN OBTAINING FEDERAL LAUNCH APPROVAL, HAS PROVEN HELPFUL.

AS YOU KNOW, STARSTRUCK IS USING A UNIQUE LAUNCHING METHOD -- TOWING ITS ELV OUT INTO THE PACIFIC FOR A LAUNCH FROM THE OCEAN SURFACE IN INTERNATIONAL WATERS. WHEN STARSTRUCK ENCOUNTERED DIFFICULTIES WITH LOCAL PORT AUTHORITIES, WE WERE ABLE TO REQUEST COAST GUARD ASSISTANCE IMMEDIATELY. USCG WAS ABLE TO CONVENE THE PARTIES TO ADDRESS ALL MATTERS OF PORT SAFETY, IN WHICH IT IS THE EXPERT, AND TO OFFER ESCORT SERVICES THROUGH THE PORT. THIS SATISFIED LOCAL OFFICIALS.

STARSTRUCK ALSO DECIDED THAT IT NEEDED TO MOVE ITS LAUNCH AREA CLOSER TO THE

U.S. COASTLINE, WHICH MEANT CHANGING THE SURFACE AND AIR SPACE THAT HAD TO BE CLEARED BY COAST GUARD, FAA, AND THE DEPARTMENT OF DEFENSE. OUR ABILITY TO CALL ON THE FAA'S GOOD OFFICES AND TO COORDINATE THE REVIEWS BY ALL THESE AGENCIES HELPED OUT AGAIN.

WHEN STARSTRUCK MET RESISTANCE FROM THE OFFICIALS OF ONE CALIFORNIA TOWN THROUGH WHICH IT NEEDED TO SHIP ITS VEHICLE, THE MATERIALS TRANSPORTATION BUREAU WITHIN DOT ASSURED THE TOWN THAT THE SHIPMENT WOULD NOT BE HAZARDOUS, AND THAT IT WOULD NOT HARM ANY NATIONAL SECURITY OR SAFETY INTERESTS. THIS SATISFIED THE LOCAL OFFICIALS.

AS A GENERAL MATTER, WHEREVER AN APPROVAL WAS BEING DELAYED UNNECESSARILY, WE WERE ABLE TO EXERCISE OUR RESPONSIBILTY UNDER THE EXECUTIVE ORDER TO INTERVENE AND RAISE THE PRIORITY OF THE REVIEW BEING CONDUCTED. HAVING A LEAD AGENCY REALLY HELPED.

THESE EXPERIENCES HAVE TAUGHT US THAT WE MUST AVOID AT ALL COSTS AN ATTEMPT TO REDUCE REGULATION TO A SINGLE, ALL-ENCOMPASSING PROCEDURE DESIGNED TO MEET ALL POTENTIAL SITUATIONS. IT WOULD BE IMPOSSIBLE TO FORESEE ALL THE POSSIBLE IMPEDIMENTS CONFRONTING JUST THE SINGLE STARSTRUCK LAUNCH, AND A REGULATION ATTEMPTING TO DO SO WOULD BE IMPRACTICAL IN OUR VIEW. FURTHERMORE, WE WERE ABLE TO RESOLVE A NUMBER OF PROBLEMS SIMPLY BY CASE-BY-CASE INTERVENTION AS LAUNCH PREPARATIONS UNFOLDED. IN OTHER WORDS, WE NEEDED RESPONSIVENESS, NOT MORE REGULATION, IN MOST CASES. PERHAPS THE PRIME LESSON IS THAT NOT EVEN THE INDUSTRY KNOWS WHAT IT NEEDS IN THE WAY OF REGULATORY ARRANGEMENTS TO SUIT ALL SITUATIONS, AND THAT FLEXIBILITY MUST BE RETAINED FOR THE NEAR TERM.

THE COMPLEXITY OF THIS LAUNCH WAS BY NO MEANS DISCOURAGING. IT IS SIMPLY MORE DIFFICULT TO REVIEW AND APPROVE AN EXPERIMENTAL LAUNCH USING A NEW AND UNTESTED ELV THAN THE ROUTINE LAUNCH OF A TESTED AND PROVEN ONE. STARSTRUCK AND SSI WILL FACE SIMPLER AND SHORTER APPROVAL PROCESSES IN THE FUTURE AS THEY CONTINUE TO DEVELOP THEIR RESPECTIVE LINES OF LAUNCH VEHICLES. ALSO, THE NUMBER OF AGENCIES THAT MUST REVIEW AN ELV LAUNCH APPLICATION WILL VARY WITH THE CHARACTERISTICS OF THE LAUNCH. FOR EXAMPLE, STARSTRUCK DID NOT REQUIRE THE IMPORT APPROVAL FROM THE BUREAU OF ALCOHOL, TOBACCO, AND FIREARMS THAT SSI REQUIRED FOR ITS SOUNDING ROCKET.

THIS EXPERIENCE WILL GUIDE OUR DEVELOPMENT OF RECOMMENDATIONS FOR THE STREAMLINING OF REGULATION. WE ALREADY SEE THREE TECHNIQUES WHICH COULD SUBSTANTIALLY SIMPLIFY AND SHORTEN THE FEDERAL APPROVAL PROCESS: REDUCTION OR ELIMINATION OF SEQUENTIAL COORDINATION; ELIMINATION OF DUPLICATIVE REVIEW THROUGH VOLUNTARY RELIANCE OF ONE AGENCY ON ANOTHER AGENCY'S WORK, WHEREVER POSSIBLE; AND SPECIFICATION IN ADVANCE BY EACH AGENCY OF ITS INFORMATION REQUIREMENTS. I WOULD STRESS, HOWEVER, THAT WHILE THE LEADERSHIP OF THE LEAD AGENCY CAN BE INFLUENTIAL IN DEVELOPING THESE TECHNIQUES, THEY CANNOT AND WILL NOT BE IMPOSED BY THE LEAD AGENCY.

IN ADDITION, WE EXPECT TO CONVENE THE INTERAGENCY GROUP ESTABLISHED BY THE EXECUTIVE ORDER WHEN USEFUL TO BRING TO BEAR THE AGENCIES' ACCUMULATED REGULATORY EXPERTISE ON PARTICULARLY NOVEL OR DIFFICULT QUESTIONS. OF COURSE, EACH AFFECTED AGENCY IS MOST CONVERSANT WITH ITS OWN STATUTORY RESPONSIBILITIES AND HOW THEY SHOULD APPLY TO PRIVATE-SECTOR ELV SPACE LAUNCHES. IT IS IMPERATIVE TO CONTINUE THE PROCESS OF CULLING OUT WHAT IS TRULY UNNEEDED AND INAPPROPRIATE, WITH THE AID OF THE RESPONSIBLE AGENCIES.

I WOULD LIKE TO SUMMARIZE PROGRESS WE HAVE MADE IN OTHER AREAS UNDER THE EXECUTIVE ORDER. YOU ARE AWARE THAT DOT AND THE DEPARTMENT OF STATE ARE ALREADY DISCUSSING SHIFTING LAUNCH APPROVALS FOR LAUNCH VEHICLES AND PAYLOADS NOW HANDLED BY STATE THROUGH THE "ITAR" PROCESS TO DOT AS LEAD AGENCY. THE INTERNATIONAL TRAFFIC IN ARMS REGULATIONS HAVE BEEN USED AS A CONVENIENT MEANS TO REGULATE COMMERCIAL ELV SPACE LAUNCHES FOR THEIR CONFORMITY TO INTERNATIONAL TREATY, FOREIGN POLICY, NATIONAL SECURITY, AND PUBLIC SAFETY REQUIREMENTS. NOW THAT WE HAVE A DESIGNATED FOCAL POINT FOR COORDINATING APPROVALS, IT MAY BE HELPFUL FOR DOT TO PERFORM THIS FUNCTION, BUT IN A MANNER THAT WOULD NOT AFFECT THE STATE DEPARTMENT'S RESPONSIBILITIES IN INTERNATIONAL TREATY COMPLIANCE, EXPORT SALES, AND OTHER FOREIGN POLICY CONCERNS. OUR TWO DEPARTMENTS HOPE TO HAVE MORE CONCRETE INFORMATION FOR YOUR COMMITTEE SHORTLY.

IN THE AREA OF FREQUENCY ALLOCATION, WE CONVENED A MEETING OF THE FIVE ELV LAUNCH FIRMS, THE FEDERAL COMMUNICATIONS COMMISSION, AND THE NATIONAL TELECOMMUNICATIONS AND INFORMATION ADMINISTRATION TO DISCUSS FREQUENCY NEEDS AND POTENTIAL PROBLEMS. SOLUTIONS FOR FREQUENCY NEEDS IN THE SHORT TERM WERE SATISFACTORILY ADDRESSED AS WELL AS THE ACTIONS NEEDED IN THE LONG TERM. FROM THE STANDPOINT OF THE GOVERNMENT AND INDUSTRY, THE MEETING PROVED EXTREMELY HELPFUL.

WE ARE WORKING WITH THE DEPARTMENTS OF STATE AND COMMERCE, THE U.S. TRADE REPRESENTATIVE, AND NASA TO DEVELOP POLICIES TO INCREASE THE COMPETITIVENESS OF U.S. COMMERCIAL ELV'S IN THE WORLD MARKET. IN RECENT YEARS, A NUMBER OF GOVERNMENTS AND FIRMS IN OTHER COUNTRIES HAVE FOCUSED ONDEVELOPMENT OF THEIR OWN DEVELOPMENT OPTIONS. THIS HAS RESULTED IN PREFERENCE FOR THE ARIANE, FOR EXAMPLE, AS A MEANS TO DIVERSIFY SOURCES OF SUPPLY. INTERNATIONAL

ORGANIZATIONS SUCH AS INTELSAT, THE INTERNATIONAL TELECOMMUNICATIONS SATELLITE ORGANIZATION REPRESENTING 108 NATIONS, AND INMARSAT, THE INTERNATIONAL MARITIME SATELLITE ORGANIZATION, HAVE INSTITUTED POLICIES FOR SPREADING PROCUREMENT AMONG MEMBER COUNTRIES. IN ADDITION, FOREIGN SUBSIDIES HAVE NNNREASED U.S. INDUSTRY'S USE OF FOREIGN ELV'S. IF THE U.S. IS TO CONTINUE LEADERSHIP IN SPACE, WE MUST PERMIT THE PRIVATE-SECTOR THE OPPORTUNITY TO COMPETE WITH ARIANE AND OTHER FOREIGN ELV'S IN ORDER TO ADVANCE OUR OVERALL COMPETITIVENESS IN THIS AREA.

WE ARE PARTICIPATING WITH THE COMMERCE DEPARTMENT IN PREPARING POLICY PAPERS FOR UPCOMING MEETINGS OF THE OECD, THE ORGANIZATION FOR ECONOMIC COOPERATION AND DEVELOPMENT. IN THESE EFFORTS, WE ARE AIMING TOWARD AN EFFICIENT AND EQUITABLE INTERNATIONAL TRADING SYSTEM IN SPACE PRODUCTS AND SERVICES SO THAT U.S. AND FOREIGN GOVERNMENTS AND FIRMS, AS WELL AS INTERNATIONAL ORGANIZATIONS, ARE ABLE TO USE U.S. OR FOREIGN COMMERCIAL ELV'S ON A REASONABLY COMPETITIVE BASIS. IF THE U.S. CAN COMPETE ON REASONABLE TERMS, WE BELIEVE THAT WE CAN BE SUCCESSFUL.

WE ARE ALSO TAKING ADVANTAGE OF OTHER, MORE SPECIFIC OPPORTUNITIES TO PROMOTE U.S. COMMERCIAL ELV'S IN THE WORLD MARKET. FOR EXAMPLE, A DEPUTY ASSISTANT SECRETARY OF TRANSPORTATION, WHO WAS IN BEIJING FOR OTHER PURPOSES EARLIER THIS MONTH, VISITED THE CHINA BROADCASTING SATELLITE CORPORATION TO DISCUSS THE USE OF U.S. COMMERCIAL ELV'S TO LAUNCH TWO BROADCAST SATELLITES THAT THE CHINESE ARE PLANNING TO ACQUIRE. THE MEETING WAS EXTREMELY USEFUL AND RESULTED IN A NUMBER OF SPECIFIC QUESTIONS FROM THE CHINESE WHICH WERE ANSWERED IN SUBSEQUENT COMMUNICATIONS.

MEMBERS OF MY STAFF AND I, WITH THE FAA, ARE WORKING WITH THE RANGE SAFETY SPECIALISTS FROM NASA AND THE AIR FORCE TO REVIEW EXISTING FACILITIES AND PROCEDURES AND TO IDENTIFY ACTIONS NEEDED TO ENSURE THAT COMMERCIAL RANGES AND ELV'S WILL EXPERIENCE THE SAME LEVEL OF SAFETY AS ACHIEVED ON THE NATIONAL RANGES.

ON THE USE OF NATIONAL RANGES BY PRIVATE-SECTOR ELV'S, WE ARE WORKING WITH THE DEPARTMENT OF DEFENSE AND NASA TO ESTABLISH REASONABLE PRICING STRUCTURES FOR USE OF GOVERNMENT-OWNED LAUNCH RANGE FACILITIES AND SERVICES BY COMMERCIAL CUSTOMERS, AND TO IDENTIFY POTENTIAL SIMPLIFICATION OF RANGE REQUIREMENTS, AS APPROPRIATE, FOR COMMERCIAL USE.

OUR CONTACTS WITH THE INDUSTRY HAVE ALSO BEEN EXTREMELY USEFUL IN FOCUSING ON REGULATORY AND OTHER MATTERS THAT SHOULD BE ADDRESSED. THE SECRETARY IS IN THE PROCESS OF ESTABLISHING AN INDUSTRY ADVISORY COMMITTEE TO INSTITUTIONALIZE THIS FLOW OF INFORMATION. A STRUCTURE FOR CONTINUING, FOCUSED DIALOGUE WITH THE ENTIRE INDUSTRY WILL DO THE MOST TO DISCOVER AND SURMOUNT BARRIERS TO ELV COMMERCIALIZATION. THIS MEANS NOT ONLY LAUNCH-SERVICE OPERATORS, BUT ALSO THEIR POTENTIAL CUSTOMERS, THE FINANCIAL BACKERS FOR THE WHOLE INDUSTRY, AND THE INSURERS. THIS COMMITTEE WILL SERVE AS THE "EARLY WARNING SYSTEM" TO PROBE FOR REGULATORY AND OTHER HURDLES AND TAKE ACTION TO ELIMINATE OR MINIMIZE THEM.

THE COMMITTEE WILL INCLUDE REPRESENTATIVES OF THE AEROSPACE MANUFACTURERS, LARGE AND SMALL LAUNCH COMPANIES, SATELLITE DEVELOPERS, COMMUNICATIONS COMPANIES, INVESTMENT FIRMS, THE SPACE LAW COMMUNITY, INSURANCE COMPANIES, THE RESEARCH AND ACADEMIC COMMUNITIES, AND OTHER EXPERTS IN THE SPACE FIELD. WE HOPE TO ANNOUNCE THE MEMBERSHIP OF THE COMMITTEE SHORTLY AND TO CONVENE THE FIRST MEETING THIS SPRING.

I HAVE DESCRIBED SEVERAL OF THE MOST IMPORTANT INITIATIVES WE ARE CURRENTLY UNDERTAKING AS LEAD AGENCY TO BRING FORM AND SUBSTANCE TO ASSISTING THIS ELV INDUSTRY. WITH EACH INITIATIVE, WE LEARN MORE ABOUT THE AREAS THAT DO AND DO NOT DESERVE EMPHASIS AND THE COMMITMENT OF RESOURCES. I CANNOT STRESS ENOUGH THE IMPORTANCE OF THE FLEXIBILITY REFLECTED IN THE EXECUTIVE ORDER PROCESS TO DEFINE THE WORK OF THE LEAD AGENCY. IT IS TOO EARLY, IN MY VIEW, TO ENACT LEGISLATION DEFINING THIS TASK.

I RECOGNIZE THAT THERE ARE SOME MEMBERS OF THE COMMITTEE WHO HAVE CONCERNS ABOUT SIMPLY TRUSTING THE EXECUTIVE BRANCH TO MAINTAIN ITS COMMITMENT TO ENCOURAGING THE ELV INDUSTRY. CONGRESSIONAL INTEREST INITIATED CONSIDERATION OF THIS ISSUE, AND THIS COMITTEE DISCUSSED REALIGNMENT OR ENHANCEMENT OF VARIOUS AUTHORITIES. WE RESPECT THE ANALYSIS AND STAFF WORK THAT UNDERLIE THIS VIEWPOINT AND DO NOT QUESTION THAT IT POINTS TO SEVERAL ISSUES THAT NEED TO BE RESOLVED. HOWEVER, WE STILL BELIEVE IT IS TOO SOON TO CHOOSE A LEGISLATIVE COURSE THAT WILL SUSTAIN THIS EFFORT IN THE LONG TERM.

I WOULD LIKE TO ADDRESS WHAT I BELIEVE ARE SPECIFIC CONCERNS OF THE COMMITTEE. THE FIRST, OF COURSE, IS WHETHER THE EXECUTIVE BRANCH MIGHT, BY "THE STROKE OF THE PEN" OR SHEER NEGLECT, ABANDON OR WATER DOWN THE ELV COMMERCIALIZATION EFFORT. WE WILL NOT. SECRETARY DOLE UNDERSTANDS FULLY THAT SPACE TRANSPORTATION IS EMERGING AS ANOTHER ROUTINE MODE OF TRANSPORTATION, AND THAT THE DEPARTMENT HAS A VALID AND CONTINUING ROLE IN ITS FUTURE. SHE IS ENTHUSIASTIC AND PERSONALLY COMMITTED TO THE TASK. ALSO, OTHER DEPARTMENTS HAVE GREAT STAKES IN THE FUTURE OF A COMMERCIAL ELV INDUSTRY. FOR EXAMPLE, THE STATE AND COMMERCE DEPARTMENTS HAVE CONTINUING INTERESTS IN THE INTERNATIONAL TRADE CONSEQUENCES OF ELV SPACE TRANSPORTATION. IN SHORT, I FIRMLY BELIEVE THAT

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THE ADVANCEMENT AND HEALTH OF THIS COMMERCIAL ELV INDUSTRY WILL BECOME INCREASINGLY IMPORTANT TO THE EXECUTIVE BRANCH, AND THAT THE CONFLUENCE OF COMMERCIAL AND NATIONAL INTERESTS WHICH HAVE BROUGHT THE INDUSTRY TO ITS PRESENT STAGE OF DEVELOPMENT WILL ENSURE A HIGH LEVEL OF GOVERNMENT INTEREST FOR MANY ADMINISTRATIONS TO COME.

ANOTHER COMMITTEE CONCERN IS THAT THERE BE MINIMUM BUT APPROPRIATE REGULATION OF PAYLOADS. THE STATE DEPARTMENT HAS BEEN INVITED HERE TODAY TO ADDRESS THIS TOPIC IN THE CONTEXT OF THE FOREIGN POLICY AND INTERNATIONAL ISSUES INVOLVED IN MONITORING COMMERCIAL PAYLOADS, FOREIGN AND DOMESTIC. THE COMMITTEE CORRECTLY ANTICIPATES THAT A SYSTEMATIC OVERSIGHT OF THIS AREA WILL BE NEEDED. THE U.S. IS ABSOLUTELY LIABLE UNDER INTERNATIONAL TREATY FOR ANY DAMAGE SUFFERED BY NATIONALS OF OTHER COUNTRIES FROM ANY LAUNCH IN WHICH WE QUALIFY AS THE LAUNCHING STATE. WE MUST ALSO REVIEW THE PAYLOAD FOR UNAUTHORIZED TRANSFER OF U.S. TECHNOLOGY. I HAVE ALREADY MENTIONED THE ROLE THAT DOT MAY PLAY IN THE ITAR PROCESS, FOLLOWING OUR ONGOING DISCUSSIONS.

A THIRD CONCERN IS DOT'S LACK OF EXPERTISE TO SUPPLANT THE NORMAL REGULATORY PROCESS OF OTHER AGENCIES IN ORDER TO SPEED APPROVAL OF A COMERCIAL ELV LAUNCH. AS WE EXPLAIN IN DETAIL IN OUR COMMENTS TO YOU ON H.R. 3942, WE DON'T BELIEVE CONSOLIDATING THE AUTHORITY OF OTHER AGENCIES IN A SINGLE "SUPER AGENCY" IS PRACTICAL IN ANY REALISTIC TIME FRAME. NO AGENCY HAS THE TECHNICAL DEPTH, LONG REGULATORY EXPERIENCE IN THIS CONTEXT, INSTITUTIONAL MEMORY, OR OTHER STRENGTHS TO SUPPLANT ANOTHER AGENCY'S JUDGMENT, NOR SHOULD IT SEEK TO DO SO. ACQUIRING SUCH EXPERTISE AND EXPERIENCE BY THE LEAD AGENCY WOULD BE EXTREMELY TIME-CONSUMING AND DUPLICATIVE. WE THINK THE APPROACH OF THE EXECUTIVE ORDER, STRESSING PROCEDURAL GAINS WHILE RELYING ON EXISTING AGENCY EXPERTISE, WILL YIELD MORE BENEFITS FAR MORE QUICKLY.

IN CLOSING, I WOULD LIKE TO THANK THE COMMITTEE FOR PUTTING COMMERCIAL ELV SPACE TRANSPORTATION ON ITS AGENDA AND ENCOURAGING GOVERNMENT ACTION. MUCH REMAINS TO BE DONE, OF COURSE, BUT YOU HAVE PROMPTED THE EXECUTIVE BRANCH TO RECOGNIZE THAT COMMERCIAL ELV'S ARE NEEDED TO PROVIDE AN ALTERNATE MEANS OF PLACING PAYLOADS IN SPACE. FOR MANY MISSIONS NOT REQUIRING MANNED CAPABILITY, COST-EFFECTIVE, DEDICATED, AND RELIABLE ELV'S ARE SUITABLE. THEIR CAPABILITY CAN BE INVALUABLE WHEN USERS NEED TO PLACE SPECIALIZED PAYLOADS IN SPACE WHEN THE TIME, ORBIT, MANIFEST, OR LAUNCH WINDOW MAY BE UNAVAILABLE THROUGH THE SHUTTLE.

WE LOOK FORWARD TO WORKING ON ELV COMMERCIALIZATION WITH THE SUBCOMMITTEE IN THE FUTURE. THIS COMPLETES MY PREPARED STATEMENT, AND I WOULD BE PLEASED TO RESPOND TO THE COMMITTEE'S QUESTIONS.

Mr. VOLKMER. Thank you very much, Ms. Dorn. I do have some questions, and if I don't get to all of them we will submit them to you in writing because I'm under a time constraint today.

Ms. DORN. I see.

Mr. VOLKMER. There's a conference committee that I have to be at at 3 o'clock.

In discussions with you, and as your statement says, you oppose the legislation at this time for ELV commercialization. Your statement also encourages the establishment of a predictable regulatory structure, basically, and I'd like to know how you plan, under an Executive order, to be able to predict to industry that this methodology, whatever it is, would be followed.

Ms. DORN. Yes. We feel that it is very important that we maintain a flexibility in our regulatory or deregulatory approach. If we fail to do that and try to anticipate consequences down the road or needs down the road, in effect, we may thwart our entire effort and our mutually shared goals.

What we have found up until this point is that it isn't the number of regulations that have been the problem, but rather that regulations have been designed primarily for other purposes and that we, in effect, have unintended consequences when those regulations are applied simultaneously. If we were to use a legislative fix, as it were, on this issue, and—for example, what you recommend in the bill under one approach is that we have a super agency concept by which, under legislation, we establish that the jurisdiction of other agencies will be superseded by the jurisdiction of the Department of Transportation. We see that that would not solve the problem that we hope to solve. Let me just give a couple of examples which I think may serve to illustrate my point.

In the instance of the Starstruck license application, the launch was to occur in a military warning area. If in fact under the provision of the bill, we, as the Department of Transportation, would

have overridden the concern on the part of the Department of Defense and sought to override their objection to the launch and the clearance of airspace, we would still have faced the same kind of conflict of regulation. In other words, the Department of Defense, under non-space-related types of activities, has the authority to carry out military exercises. What we would face, then, is what we ultimately faced in the resolution of the process; that was sitting down with the Department of Defense, determining how we could make a window for both—a window for the Department of Defense and its military exercise, and a window for the potential launch applicant. And that is the kind of resolution which is really required in resolving this problem.

One other brief example would be a potential launch applicant whose trajectory of the launch goes over some points in Mexico. Now, if the Department of State were to say to us, "We do not, because of the situation with Mexico at this point in time, believe it is desireable for you to overfly that airspace," and we are granted superseding authority to say that doesn't matter because in our view this is a priority of the administration, we would still face a conflict of regulations that would have to be resolved.

Mr. VOLKMER. At the present time, of course, we've only had the two applicants, but we do have others that are interested in commercialization of expendable launch vehicles. In your discussions with the industry, do they concur in the position that the administration presently holds?

Ms. DORN. In terms of legislation?

Mr. VOLKMER. Yes.

Ms. DORN. In our discussions with industry they have given no objections to the approach by which the Department of Transportation, under the Executive order, is proceeding.

Mr. VOLKMER. Let's go back to Starstruck for just a minute and what you did for them is fine; I have no objection to that. But as I understand it, the rocket was taken out for launch from the ocean; is that correct? On a barge?

Ms. DORN. That is correct, sir.

Mr. VOLKMER. Who from your office or from Department of Transportation accompanied that launch?

Ms. DORN. There was no Federal employee, at least from my knowledge, that accompanied the launch. Because of the FAA determination of the extent of minimal risk and the fact that they had evaluated the plan and the trajectories and the destruct mechanism, the command destruct mechanism on the actual rocket, it was determined that in this particular case that kind of supervision was not required.

As well, there was real-time communication with NORAD in order to determine precisely the trajectory and that the launch would or would not occur.

Mr. VOLKMER. Do you feel that if you have—let's say not that, but a private launch facility pad—that launches in the future would plan to be taking place from those, do you feel that those should be monitored by anyone from your agency?

Ms. DORN. Definitely. We think it is very appropriate to model our approach on potential commercial ranges on the model that has been so carefully worked out on national ranges under the Air

Force monitoring device. It seems to us appropriate to have a range safety officer that would clearly be a Federal employee to in fact invoke, if necessary, the command destruct mechanism and also serve to supervise the various safety requirements that we have met. All the time, being very conscious that we do not, in any way, want to impede in an unwanted manner the industry's activities as long as we are sure that the public safety, the national security and international and foreign policy issues have been satisfied.

Mr. VOLKMER. What agency would that person be that is monitoring the launch?

Ms. DORN. Well, we have not worked out the details of that, Mr. Chairman. It would be our anticipation that it would be representatives from the Federal Aviation Administration, which is, as you know a part of the Department of Transportation.

Mr. VOLKMER. And if they decided not to?

Ms. DORN. Pardon me, sir?

Mr. VOLKMER. And if they decided not to?

Ms. DORN. If they decided not to?

Mr. VOLKMER. Yes.

Ms. DORN. I don't believe that would be an option, given that it is the Secretary's choice and desire that a Federal employee be present. I don't think we'd run into that circumstance because we've had the utmost cooperation with the Federal Aviation Administration in seeking to assure that public safety demands are met.

Mr. VOLKMER. That would be the same as—who would be the responsible agency in the event that there was a launch and then—although we don't want it to happen—the missile, instead of following its trajectory, followed a different one and ended up—let's say it was shot off somewhere in Texas and ended up in San Antonio?

Ms. DORN. I would hope that that would be an extremely unlikely happenstance.

Mr. VOLKMER. Well, just assume. Which Federal agency has the responsibility to check into it and see what happened? You know, FAA does that and we have the Aviation Safety Board for those types of things, and railroad accidents, we have those, but what do we have for a missile that goes haywire?

Ms. DORN. In terms of checking to see what actually happened?

Mr. VOLKMER. Yes.

Ms. DORN. It would be, in my estimation, the Federal Aviation Administration, and using also the technical expertise of other agencies which may be able to put together the scenario which may have caused the accident.

Mr. VOLKMER. I'm just curious as to whether the present law providing for airline safety would also apply to missile safety and those types of things, investigations. You see, these are the kinds of things I think we need to develop, and I don't think we need—what we're trying to do, of course, in the legislation, I think if you review the legislation you will find that there is authority there as to who does it and who is responsible.

Ms. DORN. Yes, sir. I don't believe that we would have a problem with respect to the authority, but it's rather the details of how we would implement the authority because, as you know, under the Outer Space Treaty the Government is liable for any kinds of dam-

ages if this were not a domestic situation. So the problem, in our view, would not be the authority but how we choose to carry it out.

Mr. VOLKMER. At the present time the international traffic in arms regulations under the Arms Export Control Act, by the State Department, basically are what we would use, are they not, on private ELV's and payloads for national security, foreign policy concerns, et cetera; is that correct?

Ms. DORN. What we seek——

Mr. VOLKMER. That's the basis?

Ms. DORN. Oh, yes, I'm sorry, I misunderstood. That is correct, sir. One aspect of the ITAR regulatory authority.

Mr. VOLKMER. Well, do we have anything else?

Ms. DORN. Do we have anything else to——

Mr. VOLKMER. Legislatively bypass you?

Ms. DORN. I see.

Mr. VOLKMER. To direct the questions of the international concerns about exporting—in other words, rockets?

Ms. DORN. It is my understanding, sir, that when we discovered the need to have a legislative handle—or to have a regulatory handle, rather—on regulating private sector launches from commercial pads, that the ITAR process was used as a mechanism, and that is the existing authority, to my knowledge.

Mr. VOLKMER. We're doing it, basically, that these are munitions?

Ms. DORN. That's correct, and that these are, in fact, exports. And that is why we have sought to use this mechanism and this part of the authority to transfer to the Department of Transportation as the lead agency. In no way would that take away the existing and more traditional authority of the munitions list, if you will, for exports of these kinds of vehicles and payloads between countries. It would simply allow us the hook, the legislative hook by which we could review the license applications.

Mr. VOLKMER. Well, some of us look upon this hook as a very fine one. We're not arguing with it, and I don't think anybody in the industry is arguing with it right now, but it's under legislation that actually wasn't intended—as you pointed out, much of the legislation was never intended for the question of launch vehicles or payloads.

Ms. DORN. That's correct, sir.

Mr. VOLKMER. And so we're just fitting them in wherever we can.

Ms. DORN. That is right.

Mr. VOLKMER. And that's what we're presently doing?

Ms. DORN. That's correct.

Mr. VOLKMER. And you do not see the desirability of trying to specifically provide for something that's not presently specifically provided for? I'm talking about the legislation.

Ms. DORN. It seems to me that the problems we have really are process-oriented; and if we could determine an appropriate legislative fix that would design regulations that were simply addressed and procedurally addressed to space launches, that would be a good thing. In our viewpoint, however, the existing mechanisms are working in terms of the regulatory authority which is required; but the problem is, how is it that we make it in a process that isn't

burdensome to the industry? The ITAR process works well, substantively. The question is, can we streamline it so that it will not be a burden to the industry?

Mr. VOLKMER. Now, you're presently negotiating with State to transfer the ITAR authority as it relates to launch vehicles or expendable launch vehicles for commercial payloads, to DOT?

Ms. DORN. That is correct.

Mr. VOLKMER. What is the reason for that?

Ms. DORN. We believe that the payload launch and the vehicle launch are so intricately related that the approval process is very appropriately housed in the same lead agency. In other words, the same situation——

Mr. VOLKMER. The State Department, under the law, would still have to pass on it, would it not?

Ms. DORN. That is correct, when it has to do with foreign policy concerns, which is the same as the launch vehicle if we work out the transfer of ITAR to the Department of Transportation. Still, the State Department and the Defense Department would have the authority and the obligation, in fact, to review those applications for purposes of compliance with national security and foreign policy issues.

Mr. VOLKMER. Are you going to be making the same—what I'm trying to find out in my own mind, are you going to be making the same basic review initially and then send it to them for review?

Ms. DORN. What the ITAR process does now at the State Department is, the State Department receives that application and, in its judgment, determines which agency needs to review it—which agencies need to review it. In the example of Starstruck, that application was sent to the FAA and to NASA and to the Department of Defense for their various chops on it, as it were, and then they became a coordinative mechanism outside of the aspect where they were to review it for foreign policy concerns. It seems to us that it's very possible that agencies directly involved in this process, if it were transferred to the Department of Transportation, might not be as actively involved in ways that are not mandated, and therefore we can streamline the process.

Clearly, the ITAR mechanism is the basic licensing procedure which the administration has developed to regulate the license application procedures. We find no problem in that, other than it seems more appropriate to have the lead agency, which truly has the honest broker responsibility, to shepherd that application through. And it does not seem necessary to have the State Department process have an additional cut on the authority.

Mr. VOLKMER. This is nothing that I disagree with; I agree with you wholeheartedly, what you're doing. But to me it points out that one of the things that we are attempting to do in the legislation is basically the same thing.

Ms. DORN. I guess I see that the provision in the legislation requires a superseding authority over the State Department by the Department of Transportation, and that's what we——

Mr. VOLKMER. That's what we do in the legislation.

Ms. DORN. I see. In the bracketed language in section 103, where you say that it would not, indeed, be a superseding authority but rather a coordinative mechanism?

Mr. VOLKMER. Right.

Ms. DORN. We see the problem there. While I agree with your intent, that it would be advisable if perhaps, at some point in the future, to have regulations which are specific to this purpose and not used for other purposes—it seems to me that by imposing a license requirement on the Department of Transportation without additional substantive authority, you're just adding one more layer of requirements. And I'm not sure that is helpful to the industry. While I see what you're trying to address and I certainly agree with it, we're just not sure at this point in the process that that is, in effect, going to be helpful to the industry.

Mr. VOLKMER. Or needed?

Ms. DORN. At this point in time, yes. That would be accurate, sir.

Mr. VOLKMER. Now, where are you as far as developing criteria for private launch ranges?

Ms. DORN. We have been working very closely with the Air Force to determine which of their safety requirements are appropriate to a potential commercial range, and which could potentially be modified. Since there has been to date no proposal for a commercial range, there is some difficulty in proceeding expeditiously on that front; however, we are working very closely with the Air Force to determine those standards in advance of a proposal which may come to us.

Mr. VOLKMER. Now, if I was to want to construct a launch range right now, what license would I need? Just to build one?

Ms. DORN. Just to build one?

Mr. VOLKMER. Yes.

Ms. DORN. Just to build one—let's see. In that respect, the process has not been clearly established. You would come to the Department of Transportation as the lead agency, and we would have to develop a process, and that's what we are currently working on.

Mr. VOLKMER. Well, my question is, I think we'd better evaluate it as to whether there's any requirement in the law anywhere for me to build just a launch range?

Ms. DORN. Certainly, there are a number of requirements that, again, are not specific to commercial launch ranges for rocketry. But they would be imposed if, in effect, this was a site which constituted a major Federal action that significantly affected the health of the environment. Perhaps the EPA mechanism would be invoked. The public safety responsibilities of a launch which occurs on that commercial range would be invoked through the FAA's responsibility in inner space. There is currently no precise process. There is the legislative authority to assure that whatever commercial site is developed complies with public safety and national security issues. That is what we're working on now, Congressman.

Mr. VOLKMER. So right now, we don't know who all will be ultimately responsible for development of private launch ranges?

Ms. DORN. You mean, in terms of the Government?

Mr. VOLKMER. Yes.

Ms. DORN. The Department of Transportation and the Office of Commercial Space Transportation would oversee that, or rather coordinate is a better term, to assure that public requirements have been met. A potential commercial site owner would come to the Department of Transportation, and we would advise him or her how

that could proceed expeditiously. The precise process and which agencies would be involved, we'd be happy to submit a list for you to the record which would indicate, through our regulatory analysis, which agencies would have a role to play in that approval.

Mr. VOLKMER. Now, as I understand it from your testimony, you have worked it out with the Department of the Air Force, Department of Defense, on reimbursement only for direct costs; is that correct?

Ms. DORN. We have been working very closely with the Air Force, and the Air Force has recommended that direct costs be levied against the commercial user as well as against any Government user in the future. That proposal, I believe, is before the Secretary of Defense for his approval.

Mr. VOLKMER. All right. And at that time I'm sure that the details of it, as to what are the direct costs, will be outlined for industry so that the would know?

Ms. DORN. Certainly, sir. In fact, I could shed some bit of light with respect to that.

In terms of direct costs, we are talking about any item of cost that is identified with one final action. In other words, only those costs which are directly attributable to that launch, not including overhead. And these would include such things as labor, materials, minor construction, utilities, equipment, that sort of thing. We'd be happy to submit for the record a complete list as that proposal moves forward.

Mr. VOLKMER. Well, I want to conclude because we've got another witness and then I'm going to have to leave. I will have some additional questions we'll submit to you in writing.

Ms. DORN. Fine, sir.

Mr. VOLKMER. I want to personally commend you and the Secretary for the work that you are doing.

Ms. DORN. Thank you.

Mr. VOLKMER. I wish you continued success. However, I still think that some of us are desirous to have the permanency—and I know you address that in your statement—but I'm sure that we will continue to work with you to, hopefully, make the commercialization of ELV's a success.

Ms. DORN. Definitely. We plan to do so. And if I could just add a personal note; the experience in working with your staff, both majority and minority, has been a real joy. Their professionalism and their obvious concern for this issue, I think, has been a real asset to our efforts.

Mr. VOLKMER. I know Mr. Lujan may have had some questions, and if he does, he can submit those in writing. He has been called away for a little while.

Ms. DORN. Thank you very much, Mr. Chairman.

Mr. VOLKMER. Thank you very much.

Our next witness or visitor, Otho Eskin—is it Otto, or Otho?

Mr. ESKIN. Otho.

Mr. VOLKMER. Otho, all right. Director, Office of Advanced Technology, Bureau of Oceans and International Environmental and Scientific Affairs of the Department of State.

Mr. Eskin, your statement, too, will be made a part of the record in full. You may either summarize or you may review the state-

ment in full; but if you review it in full, we probably won't have any questions. So you go right ahead. [Laughter.]

STATEMENT OF OTHO ESKIN, DIRECTOR, OFFICE OF ADVANCED TECHNOLOGY, BUREAU OF OCEANS AND INTERNATIONAL ENVIRONMENTAL AND SCIENTIFIC AFFAIRS, DEPARTMENT OF STATE

Mr. ESKIN. Thank you, Mr. Chairman. In light of what you said I will make a very brief summary.

I am very pleased to be here today and to have the opportunity to discuss the issues associated with the facilitating of commercialization of expendable launch vehicles and, specifically, the question of payloads which you've identified.

The Department of State, to begin with, fully supports this objective, commercialization of ELV's, and we fully support the designation of the Department of Transportation as the lead agency. We have worked very closely with Transportation in the past and would expect to continue to do so over the coming months and years as this program gets underway.

On the question of the Department of State's specific concerns regarding ELV's and payloads, we take this issue extremely seriously. We have a number of international treaty obligations and a number of obviously major potential consequences in our foreign relations with other countries and our national security interests that touch on this program. It is one which we follow very closely and we are working with Transportation to develop a program which will fully protect our national foreign policy and security interests.

We feel that, as of now, we have the legal and administrative mechanism in place through ITAR to effectively protect our foreign policy and national security interests. This has been used in two cases and we would expect to continue to use this legal and regulatory framework in the future. We feel that the system has worked, which is not to say that it can't be improved upon or streamlined; we are prepared to do that, and we will work with Transportation and other agencies and with the industry. We welcome any suggestions on how this system can be made more effective and more streamlined, but we think, fundamentally, the system does work. At this time we do not see any requirement for additional legislation or mandate to make the system function more effectively.

With that, I'll bring my summary of the statement to a conclusion and would welcome any questions you may have, Mr. Chairman.

[The prepared statement of Mr. Eskin follows:]

STATEMENT OF
MR. OTHO ESKIN
DIRECTOR, OFFICE OF ADVANCED TECHNOLOGY
BUREAU OF OCEANS AND INTERNATIONAL ENVIRONMENTAL
AND SCIENTIFIC AFFAIRS
DEPARTMENT OF STATE

BEFORE THE SPACE SCIENCE AND APPLICATIONS SUBCOMMITTEE OF
THE HOUSE SCIENCE AND TECHNOLOGY COMMITTEE
MARCH 29, 1984

MR. CHAIRMAN, MEMBERS OF THE SUBCOMMITTEE:

I AM PLEASED TO APPEAR BEFORE THE SUBCOMMITTEE TO DISCUSS ISSUES RELATED TO FACILITATING COMMERCIALIZATION OF EXPENDABLE LAUNCH VEHICLES.

I MUST FIRST STATE THAT THE DEPARTMENT FULLY SUPPORTS THE COMMERCIALIZATION OF EXPENDABLE LAUNCH VEHICLES (ELVs), AND THE DESIGNATION OF THE DEPARTMENT OF TRANSPORTATION AS THE LEAD AGENCY RESPONSIBLE TO ENCOURAGE, FACILITATE, AND COORDINATE THE DEVELOPMENT OF COMMERCIAL ELV OPERATIONS BY PRIVATE U.S. ENTERPRISE. THE PRESIDENT's EXECUTIVE ORDER 12465 OF FEBRUARY 24, 1984 HAS SET THE NECESSARY FRAMEWORK FOR THE DEPARTMENT OF TRANSPORTATION TO UNDERTAKE THEIR RESPONSIBILITIES ON THIS MATTER. WE HAVE BEEN WORKING WITH THEM ON THIS ISSUE AND WILL CONTINUE TO DO SO.

WITH THE PROMULGATION OF EXECUTIVE ORDER 12465, ON FEBRUARY 24 OF THIS YEAR, WE CONSIDER H.R. 3942 TO BE PREMATURE. A MECHANISM IS ALREADY IN PLACE WHICH PROVIDES THE NECESSARY CONTROL OVER LAUNCHES AND PAYLOADS TO COMPLY WITH THE INTERNATIONAL OBLIGATIONS OF THE UNITED STATES AND TO ENSURE THAT ITS FOREIGN POLICY AND SECURITY INTERESTS ARE PROTECTED. THESE OBLIGATIONS DERIVE, IN PRINCIPAL PART FROM THE TREATIES KNOWN AS THE OUTER SPACE TREATY, THE LIABILITY CONVENTION AND THE REGISTRATION CONVENTION.

THE DEPARTMENT OF STATE CONSIDERS IT IS ESSENTIAL TO RETAIN A MECHANISM FOR FEDERAL SUPERVISION OF LAUNCHES BY PRIVATE PARTIES SUBJECT TO U.S. JURISDICTION. INITIALLY, ARTICLE VI OF THE OUTER SPACE TREATY REQUIRES THE UNITED STATES TO BEAR INTERNATIONAL RESPONSIBILITY FOR ACTIVITIES OF ITS NATIONALS IN OUTER SPACE, TO AUTHORIZE AND PROVIDE CONTINUING SUPERVISION OF THOSE ACTIVITIES. TOWARD THIS END, WE WOULD SEEK TO ENSURE THAT PAYLOADS ARE LAUNCHED FOR PEACEFUL PURPOSES AND WILL NOT CAUSE HARMFUL CONTAMINATION OF OTHER CELESTIAL BODIES, DAMAGE TO OTHER COUNTRIES, OR ADVERSE IMPACTS ON THE EARTH'S ENVIRONMENT. IN ADDITION, IN INSTANCES WHERE THE UNITED STATES PROCURES A LAUNCH OR AUTHORIZES A LAUNCH FROM ITS TERRITORY, ARTICLE VII OF THE OUTER SPACE TREATY AND THE LIABILITY CONVENTION RENDERS US AS LIABLE TO PAY COMPENSATION FOR PERSONAL AND PROPERTY DAMAGE TO FOREIGN GOVERNMENTS, CORPORATIONS AND NATIONALS OF STATES PARTY TO THE CONVENTION, CAUSED BY THE LAUNCH VEHICLE OR PAYLOAD ON THE SURFACE OF THE EARTH OR

TO AIRCRAFT IN FLIGHT. WE MUST BE CONCERNED ABOUT WHO USES THE LAUNCH VEHICLE AND PAYLOAD AND FOR WHAT USE. FOR EXAMPLE, IT WOULD MAKE NO SENSE WHATEVER TO CONSIDER APPROVING A U.S. LAUNCH OF A PARTICULAR SATELLITE/PAYLOAD FOR CERTAIN COUNTRIES. THERE ARE OTHER COUNTRIES OR CIRCUMSTANCES WHERE A U.S. LAUNCH OF ITS PAYLOAD WOULD BE APPROPRIATE AND WOULD PROMOTE U.S. FOREIGN POLICY INTERESTS. IN SHORT, TO ENSURE PROTECTION OF U.S. NATIONAL SECURITY AND FOREIGN POLICY INTERESTS, THE GOVERNMENT MUST OVERSEE AND CONTROL PAYLOADS LAUNCHED BY PRIVATE PARTIES SUBJECT TO U.S. JURISDICTION WITHIN THE UNITED STATES OR OUTSIDE THE U.S.

THE FEDERAL GOVERNMENT NOW HAS THE LEGAL AUTHORITY AND THE ADMINISTRATIVE MECHANISMS REQUIRED TO CONTROL AND OVERSEE ELV PRIVATE LAUNCH SERVICES, INCLUDING THE PAYLOADS, CARRIED OUT IN THE U.S., ITS TERRITORIES AND POSSESSIONS, AND ITS TERRITORIAL WATERS, AND BY CITIZENS OF THE UNITED STATES FROM INTERNATIONAL WATERS USING VESSELS DOCUMENTED UNDER THE LAWS OF THE UNITED STATES.

TO DATE, THERE HAVE BEEN ONLY TWO APPLICATIONS FOR A LICENSE TO LAUNCH AN EXPENDABLE LAUNCH VEHICLE BY A PRIVATE PARTY. THE FIRST WAS AN APPLICATION SUBMITTED BY SPACE SERVICES, INC. OF HOUSTON, TEXAS WHICH WAS APPROVED JUST PRIOR TO THEIR CONESTOGA I LAUNCH FROM MATAGORDA ISLAND IN SEPTEMBER 1982. WHEN SPACE SERVICES, INC. SUBMITTED THEIR REQUEST, AN INTERAGENCY TEAM DECIDED

THAT EXISTING LAW, NAMELY THE ARMS EXPORT CONTROL ACT, AND CURRENT REQUIREMENTS OF THE FCC AND FAA WERE ADEQUATE TO SATISFY CONCERNS ON REGULATIONS AND CONTROL OF PRIVATE SPACE VEHICLES. CONSEQUENTLY, THE INTERNATIONAL ARMS IN TRAFFIC REGULATIONS (ITAR) PROCESS WAS ADOPTED AS AN INTERIM MECHANISM, IN TANDEM WITH EXISTING FCC AND FAA CONTROLS.

AFTER CONESTOGA I, A SECOND APPLICATION SUBMITTED BY STARSTRUCK, INC., OF REDWOOD CITY, CALIFORNIA WAS APPROVED ON JANUARY 4, 1984. STARSTRUCK, INC. INTENDS TO LAUNCH A SUBORBITAL TEST VEHICLE FROM A BARGE-PLATFORM IN INTERNATIONAL WATERS OFF THE COAST OF POINT MUGU, CALIFORNIA THIS MONTH OR NEXT. BOTH OF THESE LICENSES WERE ISSUED BY THE DEPARTMENT OF STATE'S OFFICE OF MUNITIONS CONTROL (OMC) AFTER A CAREFUL INTERAGENCY EVALUATION UNDER OMC DIRECTION. THESE LICENSES WERE NOT ISSUED UNTIL THE CONCERNS OF INVOLVED GOVERNMENT AGENCIES WERE TAKEN INTO ACCOUNT.

THIS MECHANISM HAS BEEN EFFECTIVE UNTIL NOW IN VIEW OF THE SMALL NUMBER OF APPLICATIONS INVOLVED. HOWEVER, THE DEPARTMENT OF STATE AND OTHER CONCERNED AGENCIES HAVE, SINCE THE BEGINNING, RECOGNIZED THAT THE MECHANISM MIGHT HAVE TO BE MODIFIED TO DEAL WITH AN INCREASE IN THE VOLUME AND IN ORDER TO FACILITATE AND ENCOURAGE PRIVATE SECTOR INVOLVEMENT IN COMMERCIAL DEVELOPMENT OF ELV LAUNCHING SERVICES.

THE DEPARTMENT OF TRANSPORTATION HAS BEGUN WORK ON PROPOSALS TO STREAMLINE THESE MECHANISMS.

WE WELCOME THE EFFORTS OF DOT TO EXPEDITE EACH AGENCY'S REVIEW OF THE LICENSING PROCESS.

IN ADDITION, WE FEEL THAT THE CONTROL OF PAYLOADS, MUST BE CAREFULLY CONSIDERED. REGULATION OF PAYLOADS AND THEIR USE INVOLVES DIFFERENT CONSIDERATIONS THAN REGULATION OF ELV LAUNCHES. SATELLITE COMMUNICATIONS TECHNOLOGY IS MORE SOPHISTICATED AND THE SENSITIVITY OF END USES OF PAYLOADS AND ELVS DIFFER. IT TAKES CONSIDERABLY MORE LEAD-TIME AND EFFORT TO OBTAIN APPROPRIATE FREQUENCY AND ORBITAL POSITION APPROVALS FOR A PAYLOAD THAN FOR AN ELV LAUNCH.

IN CONCLUSION, I WOULD LIKE TO REITERATE THAT, IN OUR WORK ON DEVELOPING AN APPROPRIATE MECHANISM, WE WILL CONTINUE TO BE GUIDED BY THE CLEAR INTENT OF BOTH THE SUB-COMMITTEE AND THE ADMINISTRATION TO ESTABLISH A CLEARLY STREAM-LINED LICENSING PROCEDURE WHICH WILL BENEFIT INDUSTRY WHILE EXERCISING THE PROPER CONTROL OVER COMMERCIAL ELV LAUNCH ACTIVITIES.

Mr. VOLKMER. Well, I have several questions, and if we don't get them all we can go to written questions.

Maybe I should have looked up in Webster's the definition of munitions, because that's basically where you all got into the act on the process to begin with as far as launch vehicles; is that correct?

Mr. ESKIN. Yes, sir.

Mr. VOLKMER. And to me, I guess a launch vehicle is an explosive device so I guess it could be considered a munition, even though to me it's not an artillery shell or a rifle bullet or machine gun bullet; it's a little bit different. Do you consider that stretching it a little bit?

Mr. ESKIN. No, sir. I think part of the problem is that munitions is somewhat of a misnomer in this context. ITAR and the basic legislative basis for ITAR uses munitions and we use the munitions list, although they cover a large variety, in fact, of equipment, facilities which would not normally be defined in a commonsense way as munitions in the sense of a specific weapon. What we look for in that are objects which have potentially significant military applications, and that would cover a large variety of items and, quite appropriately, such mandated items as launch vehicles and payloads.

Mr. VOLKMER. But basically, wasn't the provision of ITAR for the purpose of export of munitions to other countries?

Mr. ESKIN. Yes, sir, I believe that is the case. Of course, the original legislation goes back many, many years, long before this kind of equipment was ever contemplated. But I don't feel that in practical terms or in terms of the spirit of the law or of the regulatory system, we're doing any violence.

Mr. VOLKMER. You still feel, then, it's appropriate to use ITAR for both payloads and launch vehicles?

Mr. ESKIN. Yes, sir.

Mr. VOLKMER. All right.

Why do you consider a launch as an export?

Mr. ESKIN. Well, in very simple terms it is, in fact, the removal from U.S. territory and from U.S. control of a vehicle; and in terms of the intention, which is to have some kind of control over the use of these items when they have left U.S. territory, a launch is as appropriate an area to concern as the export to another country. We're concerned about the end-use of these and the effects that the removal from U.S. territory may have on other nations or under our treaty obligations.

Mr. VOLKMER. Is the launch into space the export, or is the launch beyond our territory the export?

Mr. ESKIN. In this case it would be both, if it was removed physically into the territory of another country; and as soon as it leaves our territory, then it is an export. But when it is launched, it also, from our point of view—and I think it's the accepted view of all agencies concerned—that that also constitutes an export.

Mr. VOLKMER. Now, wait a minute. An airplane takes off. That's not an export, is it?

Mr. ESKIN. No. No, sir, not that I'm aware of. But in the case of a launch of a space vehicle or launching vehicle or the payload that it is carrying, it seems to us that it is perfectly reasonable to treat this in the same category as an object which has been taken out of the country——

Mr. VOLKMER. In other words, if I shoot it up from the State of Missouri, straight up into space, and it comes back in the State of Missouri, I've exported it?

Mr. ESKIN. Well, the question that you raised of a vehicle which was going to descend and not go into any kind of orbit——

Mr. VOLKMER. It's not going into orbit, it's going up into space.

Mr. ESKIN. That is a question which has been so far an academic concern, as we haven't had the licensing question come up; and it's one that we are studying now, that particular kind of——

Mr. VOLKMER. I know it's probably academic. It's conjectural; I won't disagree with you, but it does point out the little bit of a problem that we face when we use regulations which are intended for other purposes to fit something that's come up lately without redefining it or reverifying it, at least.

Mr. ESKIN. Although I would just say that if we conclude that the kind of situation which you've just described warranted or required regulation, we feel that under existing law we could, through amendment and clarification of existing regulations, cover that type of activity as well.

Mr. VOLKMER. What type of leadtime is required under the current ITAR munitions process for someone to make application before approval?

Mr. ESKIN. You're speaking now specifically of launch vehicles?

Mr. VOLKMER. Yes.

Mr. ESKIN. It's hard to answer that question with any specificity, as we only have had two examples; and the leadtime was somewhat different for each. We're really learning our way through the

process as we get experience. The last one was approximately 5 or 6 months. Our aim would be to shorten the leadtime as much as practical.

Mr. VOLKMER. Is the process—do you have any question in regard to any technical aspects of it, to send it off to the agency that has the expertise in that, like NASA or DOD?

Mr. ESKIN. That would be the normal process in applying these regulations. But our Office of Munitions Control would, in fact, consult with NASA, Defense, and any other agency, as appropriate.

Mr. VOLKMER. All right.

On payloads, we've had no payload yet that you've had to examine?

Mr. ESKIN. No, sir, none. Not in terms of our own launching. Now we do have, of course, payloads that are being sent abroad, perhaps, for launching by other countries. I don't know whether we've actually had specific cases of that, but the ITAR system is set up to handle that type of—

Mr. VOLKMER. You are set up to handle payloads, then, you've anticipated that?

Mr. ESKIN. Yes, sir.

Mr. VOLKMER. OK.

Is your office the office that handles the applications?

Mr. ESKIN. We would not handle the application. The Office of Munitions Control would be the point of contact.

Mr. VOLKMER. All right.

Now, as I understand you've addressed it in your statement about DOT and the State Department discussing the transfer from State of the ITAR regulations with regard to ELV's and payloads, is there presently any position in the State Department on that transfer?

Mr. ESKIN. No, sir, there is not. As you are aware we have been discussing this with Transportation, and we are examining the question internally within State to determine whether that is an appropriate action to recommend, but we've not yet come to any final conclusion.

Mr. VOLKMER. What about the statutory authority and—of course, you've changed some regulations, I'm sure, but the statutory authority as far as ITAR is concerned and the treaties, et cetera, are concerned?

Mr. ESKIN. Well, there are certain statutory and legal issues which we are currently examining which do potentially raise some problems about transferring that responsibility from State to any other agency, and we have not come to any final conclusions as to whether that is soluble or not.

Mr. VOLKMER. Without further statutory language?

Mr. ESKIN. In the absence of statutory language, yes, sir.

Mr. VOLKMER. If ITAR was transferred, or that part of it affecting these ELV payloads to the Department of Transportation, from State Department, wouldn't you still be involved somewhat in the licensing process as far as treaty obligations, et cetera, are concerned?

Mr. ESKIN. Yes, sir, I'm sure we would. Although we've not reached any specific agreement, of course, Transportation, under their own proposals, would have Department of State and, indeed,

Department of Defense, continuing to play a very fundamental role in making the decisions on impact on our foreign policy and national security and meeting our obligations under international agreements.

Mr. VOLKMER. All right.

Presently, in the last two instances—if you know—what are the State Department's processes in the applications of coordinating to any extent the applications with other agencies? Did you attempt to do that when they made application?

Mr. ESKIN. Yes, sir. That is, in fact, what we do normally, and we did in those two cases.

Mr. VOLKMER. Which is basically what DOT is the lead agency for now?

Mr. ESKIN. Yes. Obviously that's correct, sir.

Mr. VOLKMER. If the applicant is denied a license under ITAR, what recourse does the applicant have? Is there an appeal procedure?

Mr. ESKIN. Yes, there is a procedure. The applicant for a license can request a review by the Office of Munitions Control and can ask for a full, detailed explanation of the grounds on which the license has been disapproved. If the applicant is debarred from further application, there is, under the Administrative Procedures Act, I believe, a review within the Department of State; but that has not, as far as I am aware, been used.

Mr. VOLKMER. Would there be any problems with transferring that part of it to DOT?

Mr. ESKIN. I'm not aware of any specific problems relating to the question of review.

Mr. VOLKMER. Once the license is issued, do you have the authority to make sure the person complies? Do you have a monitoring—

Mr. ESKIN. No. We have, under existing regulations, the ability to suspend or revoke the license if it deviates from the terms and conditions we set out; and there are very severe fines and, indeed, prison sentences provided for for violation.

Mr. VOLKMER. And is Department of State going to be part of the interagency group that's being formed by DOT?

Mr. ESKIN. Yes, sir.

Mr. VOLKMER. I have no further questions right now. We'll have just a few left, but I'm going to have to leave.

I want to thank you very much for being here. It's been very helpful and I appreciate your testimony here today, and I'm sorry I have to leave because I do have a few more; but we'll submit them to you in writing, and we'll hold the record open until we receive them, hopefully within the next week to 10 days. There won't be that many questions.

Mr. ESKIN. Thank you very much.

Mr. VOLKMER. Thank you very much, Mr. Eskin.

The subcommittee will stand adjourned.

[Whereupon, at 2:57 p.m., the subcommittee recessed, to reconvene at the call of the Chair.]

APPENDIX I

ADDITIONAL QUESTIONS AND ANSWERS FOR THE RECORD

United States Department of State

Washington, D.C. 20520

APR 20 1984

Dear Mr. Chairman:

This is in response to your letter of March 29, 1984 requesting answers to additional questions from the Subcommittee hearings conducted on March 29, 1984 regarding draft ELV commercialization legislation.

ADDITIONAL QUESTIONS FOR DEPARTMENT OF STATE

1. The DOT is supposedly seeking transfer from State Department of the ITAR regulations related to ELVs and payloads.

Question: Does State Department have a position on the transfer?

Answer: The Department is still reviewing the proposal submitted to us on March 26, 1984 by the Department of Transportation.

Question: Are there any implications of such a transfer that we should know about?

Answer: The matter is still under review. We will advise you as soon as a Department position is formulated.

Question: If ITAR regulations are transferred to DOT, how would State be involved in the licensing process?

Answer: Under any licensing regime, we would continue to fulfill such obligations as are imposed on us by statute, for example the Department of State is specifically designated under the Arms Export Control Act to resolve, amend, modify or suspend ITAR licenses. In addition, the Department of State is statutorily designated to manage the foreign policy of the United States including an assurance of compliance with international obligations. We note that under the proposal submitted to us, the Department of State would be a key agency involved in any license review and would retain the ability to deny a license request on foreign policy/international obligations grounds.

The Honorable
Harold L. Volkmer,
Chairman, Subcommittee on Space Science
and Applications,
Committee on Science and Technology,
House of Representatives.

Question: Do you believe your department should have "final say" on any matter having substantial foreign policy implications?

Answer: Definitely yes. We are obliged by statute to do so.

2. Under international law, the United States is liable for third party damages caused by space accidents that result from activities of its citizens. The government must make sure that private parties carry adequate insurance to indemnify the government. Although the level of adequate insurance and premiums can be established by the insurance industry, the government's role in working with the insurance industry to provide adequate insurance must be defined in the bill.

The Department of State wishes to note that the Subcommittee's statement is not entirely accurate. International law as embodied in the Outer Space Treaty and Liability Convention obliges the United States to assume liability for damage to foreign entities of States party to the treaty incurred by space objects launched from U.S. territory, or the launch of which the U.S. has procured. Further, we must consider carefully whether or to what extent the U.S. Government should require of this fledgling industry indemnification of the U.S. Government. Some levels of indemnification may be prohibitively costly and may result in placing expendable launch vehicles at a competitive disadvantage to the Space Shuttle. Similarly, it remains to be decided whether the industry or the government would benefit from a fixed level of insurance for a variety of missions, some of which may expose the U.S. to very limited international liability.

Question: Do you believe Section 114 of the bill, which requires the Department of Transportation Secretary to prescribe insurance amounts for ELV operators, is sufficient legislative guidance to satisfy international obligations?

Answer: We share the Subcommittee's interest in seeking compliance with international obligations, but encourage necessary flexibility in requiring different levels of insurance for different missions particularly given the apparent uncertainty about needed government protection and levels of future insurance premiums. We believe that the Department of Transportation can, with other federal agencies, as appropriate, effectively review the insurance questions and determine the appropriate amount of liability insurance in light of the responsibilities placed on the U.S. by international obligations.

Question: What role would you anticipate Department of State having in this area?

Answer: The Department would request that it be provided with enough information by the Department of Transportation to insure that the U.S. was adequately covered in respect to liability as prescribed in the Liability Convention.

The Office of Management and Budget advises that from the standpoint of the Administration's program there is no objection to the submission of this report.

Sincerely,

W. Tapley Bennett, Jr.
Assistant Secretary
Legislative and Intergovernmental Affairs

DEPARTMENT OF TRANSPORTATION RESPONSE TO
ADDITIONAL QUESTIONS FOR THE RECORD

QUESTION 1:

On February 24, 1984, the President signed an executive order designating the Department of Transportation as the lead agency for ELV commercialization.

a. Please describe the purpose of the executive order, the authority it conveys to DOT, and the activities DOT is pursuing under this authority.

RESPONSE:

Executive Order 12465 (February 24, 1984) was issued by the President to carry out his decision to encourage a private-sector expendable launch vehicle (ELV) industry in the United States. In addition to the flexibility and depth offered by an alternative space launch system, encouragement of ELV's will contribute to U.S. preeminence in space activities and promote economic growth and private entrepreneurial activity in the space environment. This will stimulate employment, investment, and new international trade opportunities.

The Executive Order facilitates commercialization of ELV's by providing for the streamlining of licensing, supervision, and regulations applicable to commercial ELV launch operations. This is accomplished through the designation of a lead agency to take overall responsibility for coordinating, simplifying, and overseeing these activities and making appropriate recommendations for improvements. The Department, as lead agency, is also responsible for promoting and encouraging ELV operations, and for appropriate planning concerning federal activities related to ELV's. The Executive Order does not effect changes in the substantive authority of any agency.

The Department is pursuing numerous activities to implement the new Executive Order. DOT has created an Office of Commercial Space Transportation which has been actively engaged in assisting one launch company (Starstruck) to obtain government clearance for its first launch. This experience has enabled DOT to identify problem areas in the federal approval process and begin to undertake streamlining of the process. The Office is creating an advisory committee with membership from manufacturers, the financial and insurance communities, professional associations, academia, and the public. A systematic review of current government procedures and policies is under way, with the objective of streamlining the licensing process.

DOT and the Department of State are discussing the potential for shifting approvals for launch vehicles and payloads now handled by the State Department through the "ITAR" process to DOT. The International

Traffic in Arms Regulations have been used to regulate commercial ELV space launches and ensure their compliance with foreign policy and national security requirements.

The Department is working with the Departments of State and Commerce, the U.S. Trade Representative, and the National Aeronautics and Space Administration (NASA) to develop policies to increase the competitiveness of American commercial ELV's in the world market. We are participating with the Commerce Department in preparing policy papers for upcoming meetings of the OECD (Organization for Economic Cooperation and Development), aimed at improving the position of the United States in these markets.

The Department is working with range safety specialists from the Air Force to review existing facilities and procedures and to identify actions needed to ensure that commercial ranges and ELV's will experience the same high level of safety as achieved on the national ranges. We are also working with the Defense Department and NASA in formulating pricing structures for use of government-owned launch range facilities and services by commercial customers, in order to establish a full-cost recovery policy for commercial and foreign shuttle flight operations.

QUESTION 2:

Please explain how DOT plans to promote commercial ELV operations under the Executive Order. How does DOT envision its role in planning and policy formulation as it relates to ELVs?

RESPONSE:

DOT intends to continue working with the Departments of Commerce and State, the U.S. Trade Representative, and NASA in Organization for Economic Cooperation and Development (OECD)efforts to develop policies and agreements regarding international trade in space products and services. An OECD ministerial meeting in May will discuss the issue in the context of international trade in high-technology goods, including telecommunications, robotics, pharmaceuticals, machine tools, and microelectronics, as well as space products and services. In addition, DOT intends to work with Commerce, State, USTR and NASA in OECD's study of international trade in space products and services proposed for next year.

National industrial policies, preferences for domestic or regional firms and international organizations' policies to spread procurements frequently lead to decisions based on political rather than technical, economic, or commercial factors. Such decisions distort international trade patterns, reduce efficiency, and are contrary to the fair trade principles of the United States, upon which we would rely to expand commercial ELV opportunities. However, DOT intends to play an active role in promoting the use of U.S. commercial ELVs by American and foreign firms and agencies and by international organizations in cooperation with the Department of Commerce.

DOT has begun to review Federal statutes, treaties, regulations, and policies which may have significant impacts on ELV commercialization efforts. DOT will obtain advice from its industry advisory group and interagency group on these matters. The Department will identify those Federal statutes, treaties, regulations, and policies which may have adverse impacts on ELV commercialization efforts. DOT will recommend appropriate changes to affected agencies and, as appropriate, to the President.

QUESTION 3:

Under the executive order:

a. How would regulatory burdens or obstacles be diminished? How would a climate of regulatory stability and certainty, which is sought by industry, be created?

b. How would the necessary licenses and approvals be issued and what role would DOT play in this process? What licenses and approvals are required?

c. In the denial or issuance of required licenses, what recourse would an applicant or third party have in challenging such a decision through administrative or judicial review? What provisions of law currently exist that might provide for such action? Are they adequate and what impact might they have on the commercialization of ELV's?

d. Once the necessary licenses and approvals are issued, how would the activities of the license holder be monitored to ensure compliance? Who would perform this monitoring and under what authority?

e. How would licenses be enforced? What enforcement authority exists and who would exercise that authority?

RESPONSE:

Executive Order 12465 provides a structure for streamlining the regulatory process of federal approvals for launch of ELV's. The Department, as lead agency, is given the responsibility to undertake numerous initiatives to minimize regulatory burdens, and affected agencies are directed to cooperate in this streamlining process, in particular, by reviewing and revising their regulations and procedures to eliminate unnecessary regulatory obstacles to the development of commercial ELV operations and to ensure that those regulations and procedures found essential are administered as efficiently as possible.

The lead agency's specific functions in this regard include --

-to expedite the processing of applications for approval of ELV launches and the establishment and operation of commercial launch ranges;

-to serve as a central point-of-contact within the federal government for ELV licensing, and for collecting and disseminating documentation needed in licensing ELV's;

-to promote consistent and equitable approval processes for all ELV applicants; and

-to recommend changes to the President or affected agencies in statutes, treaties, regulations, and policies that may adversely affect the development of a viable ELV industry.

The designation of a lead agency has itself already proven valuable to expediting the approval process. For example, DOT's Office of Commercial Space Transportation was able to speed Starstruck's applications before various federal and local authorities.

To date, DOT has identified three techniques with significant potential to shorten and simplify the federal approval process: (1) reduction or elimination of sequential referrals and coordination; (2) elimination of duplicative review through voluntary reliance by one agency on another agency's work, whenever possible; and (3) specification in advance by each agency of its information requirements. This last technique in particular would contribute to the "climate of regulatory stability and certainty" to which the question refers.

The licenses or approvals required for a private-sector launch vary with the particular launch contemplated. For example, the Starstruck launch approval did not require an import license from the Bureau of Alcohol, Tobacco, and Firearms that Space Services, Inc., required for its sounding rocket. The Department's submission for the record of November 18, 1983, on this subject contains a more detailed discussion of this subject.

As a general matter, the license or approval will continue to come from the agency presently exercising this authority (e.g., Federal Aviation Administration regulation of aviation safety matters). In the case of conformity of a launch or payload with ITAR regulations, DOT and the Department of State are discussing the possibility of a shift in launch approvals through redelegation to the Department as lead agency. In the case of approvals by agencies other than DOT, the lead-agency role will stress expedited treatment along the lines outlined above.

Concerning a challenge to either the issuance or denial of an approval, each affected agency already has in place its own mechanism for appropriate administrative or judicial review. Taking the FAA as an example again, following a decision of approval, disapproval, or waiver of stated conditions by the FAA under the provisions of 14 CFR Part 101 (Subpart C - Unmanned Rockets), an applicant or third party (person disclosing a substantial interest in such order) is entitled to judicial review (section 1006, Federal Aviation Act of 1958, as amended). In the Department's view, the processes in place for administrative and judicial review of decisions affecting ELV launches are appropriate and do not require revision.

Monitoring an ELV launch for conformity with approvals and licenses would follow in each case from the authority of the affected agency, as would any enforcement issues. In the case of the FAA, for example,

section 901 of the Federal Aviation Act of 1958, as amended, provides that failure to conform to any order issued under the Federal Aviation Act of 1958, as amended, subjects a person to civil penalties. In granting its approval, the FAA, like other agencies, can condition its approval on the availability of monitoring opportunities or techniques. This most clearly will be the technique employed in launches from the national ranges.

QUESTION 4: The only existing statute that appears to provide comprehensive authority to control private launch activities from the standpoints of safety, national security, and foreign policy is the Arms Export Control Act with its implementing regulations, the International Traffic In Arms Regulations (ITAR). This statute is implemented by the State Department. Rockets and payloads are classified as "munitions" and their launch into space is considered an "export". As such, ELVs and payloads launched by private parties are subject to export licensing by State.

a. Is it appropriate to classify ELVs and payloads that have a commercial purpose as "munitions" for purposes of control under the Arms Export Control Act? Is it appropriate to consider the launch of objects into space as "exports"?

b. What effect will the application of ITAR have on ELV commercialization? What changes in the ITAR process are recommended that would help ELV commercialization?

c. DOT is negotiating with State to transfer ITAR authority as it relates to ELVs and payloads to DOT. Why is this action under consideration and what is the status of these negotiations?

RESPONSE: Although the ITAR were not designed to regulate space launches, they have become the central licensing process for commercial launch operations. ITAR licensing authority provides a formal regulatory mechanism for commercial space launches under existing authority.

The ITAR are a statutory mechanism for the regulation of U.S. armaments, defense technology and services. The ITAR consist of a Munitions List, detailing those articles subject to export restrictions, export licensing requirements, enforcement provisions and fee and political disclosure rules. The Munitions List currently includes both manned and unmanned launch vehicles and spacecraft, as well as active and passive satellites. Many items used for commercial purposes, including ELVs and payloads, which are not viewed traditionally as "munitions", are on the Munitions List because they may be utilized for "nonpeaceful purposes".

The ITAR were intended originally to control exports from one country to another and to address national security and foreign policy issues. With the emergence of private launch capabilities, the Government recognized its lack of established regulatory control over such activities. As an interim measure to protect public safety, several interested government agencies agreed to characterize ELVs and payloads as "exports", and therefore subject to ITAR.

Presently, the ITAR represent the central licensing mechanism for commercial launch operations and are administered by the Office of Munitions Control of the Department of State. Not oriented toward evaluating technical safety concerns, the OMC relied on the FAA and NASA to assess these aspects in the launch approval process.

DOT has the capability and resources to undertake a continuing review of technical safety concerns and is ideally suited to carry out ITAR launch approval in consultation with the State Department concerning international obligations, foreign policy, and national security issues. Additionally, DOT will communicate on an ongoing basis with industry to assess the effectiveness of the licensing process and make changes when appropriate.

Over the past few months, officials from State and DOT have discussed the possible transfer to DOT of ITAR authority over launches of commercial launch vehicles and payloads into space from U.S. territory. DOT is not seeking a transfer of the State Department's traditional authority regarding ITAR licensing approval for ELVs and payloads exported to foreign countries. DOT further feels that utilization of the ITAR as a regulatory tool will not have an adverse effect on the commercialization of ELVs.

In consultation with other agencies, DOT will streamline the ITAR procedures by coordinating the review of launch applications in order to prevent duplicative reviews and requests for information.

QUESTION 5: The Committee wants to ensure that payloads launched on private ELVs are safe and do not jeopardize national security and foreign policy interests of the U.S. A payload licensing provision was included in the bill in response to this concern.

a. Will DOT license foreign payloads to be launched on commercial ELVs? How will DOT guarantee that such payloads, when launched from a commercial or national range, do not violate international treaties or pose a threat to the U.S.?

RESPONSE: At the present time, the authority to license all payloads resides in the State Department under its ITAR responsibilities. If licensing authority for commercial launch vehicles and payloads launched into space is transferred to DOT, DOT would license both foreign and domestic payloads.

DOT would not issue a license if either the Secretary of State or Defense recommends denial of an application based on considerations of foreign policy or national security. After issuance of a license, DOT would ensure that government personnel work closely with a licensee to make certain that adequate safety precautions have been undertaken in order to prevent unintended or unauthorized use of commercial launch vehicles and spacecraft.

QUESTION 6:

The bill provides for the licensing of private commercial launch sites.

a. What is the status of developing requirements for the licensing of commercial launch ranges?

b. Who will be responsible for range safety at commercial launch ranges?

c. In licensing the operation of a private range what approvals does DOT plan to acquire from state and local governments? Will such approval/disapproval expose state and local governments to liability for license rejection, property damage, third party

RESPONSE:

We are examining this issue to determine what Federal policies need to be developed or changed governing both national and commercial range operation and safety.

A number of launch firms have expressed their interest in using the national ranges for commercial launches. These companies have operated from the national ranges as launch contractors to the Government, and have not expressed any interest in commercial ranges. We are meeting with the Air Force and NASA to discuss plans, procedures and charges for commercial use of national ranges.

DOT is developing a plan to address the government's approach to regulating commercial ranges. We are discussing approaches we might use in developing standards for commercial ranges with key Federal agencies. Our current view is that the concepts used for national range operation and safety should be the reference model in developing commercial ranges, with the clear goal of requiring only those regulations necessary to meet legitimate government needs. We will be meeting in the very near future with the Air Force, National Aeronautics and Space Administration, Federal Aviation Administration and the industry concerning potential standards for commercial ranges.

The Department of Transportation has an excellent record working with State and local governments on issues of local concern, relative to every mode of transportation. The Department would not require approval of State and local officials for a commercial range license, although State and local governments may have their own regulatory requirements that commercial range operators would have to statisfy. It is not possible at this time to assess whether and to what extent a State may incur liability in connection with its role in the operation of a commercial range.

QUESTION 7:

The bill contains provisions directing DOT to take actions to facilitate and encourage the use of government launch property and services by private parties. The establishment and collection of fees for such use are also authorized.

a. What is DOT's assessment of the workability of these provisions? Does it conflict with any laws of executive directives dealing with the sale or renting of government property to private parties?

b. Private parties may acquire government launch property and services by purchase (i.e., buying) or lease (i.e., renting). What are the differences (from a legal and procedural perspective) between a purchase and lease arrangement and how should they be reflected in the bill?

c. How does DOT propose to facilitate access and use of government launch property and services by private ELV operators?

RESPONSE:

We are in the process of working with both the Department of Defense and the National Aeronautics and Space Administration to determine the facilities and services available to the commercial ELV industry, the procedures appropriate to facilitate and encourage the use of the national ranges, the respective roles of each agency, and the amounts to be charged to the industry for national range use. As soon as these assessments have been completed, we will be able to respond to the specific areas addressed above and will make this information available to you.

QUESTION 8: The draft bill directs consolidation of all existing statutory requirements pertaining to private space launches. The bill authorizes elimination of requirements that are duplicative and empowers the Secretary to waive unnecessary requirements. This action would reveal the totality of what the government expects from industry and allow a complete and comprehensive examination of all requirements. In this way, regulatory burdens could be identified before their adverse effects are experienced and eliminated.

a. What is DOT's assessment of this approach to preventing a burdensome and unnecessary regulatory environment from emerging which would stifle ELV commercialization?

b. What is the best way to simplify and expedite licensing of commercial launch operations? What authority must DOT have to accomplish this goal?

c. Covington and Burling, on behalf of Starstruck, Inc.,wrote the Committee a letter saying that by requiring a compilation of all requirements early on, an overly stifling regulatory situation would evolve because agencies would envision a worst-case scenario.

- Does DOT agree with this assessment?

- Would empowering DOT with the authority to waive duplicative or unnecessary requirements alleviate Covington and Burling's fear?

- Should commercial ELV operations be exempt from all existing statutory requirements and be governed by a new set of requirements developed by DOT in conjunction with other agencies, as proposed by Covington and Burling? Why or why not?

RESPONSE: Section 5 of Executive Order 12465, which designated DOT as the lead agency acknowledges the importance of the concerns and responsibilities of other Federal agencies. Section 5 states that the Executive Order "shall not diminish or abrogate any statutory or operational authority currently excercised by any other Federal agency." DOT also recognizes the legitimate Governmental concerns of other Federal agencies in such areas as foreign policy, national security and the environment. Legislation that would permit the DOT to supersede another agency's regulations could adversely affect that agency's ability to carry out effectively its legitimate concerns and responsibilities.

For example, a commercial launch operator might propose a launch whose trajectory would come dangerously close to a disputed portion of international airspace. Under the approach of the Committee's bill, DOT would be able to supersede the authority of the State Department in this matter. To permit this result would ultimately thwart the ability of the State Department to carry out its statutory and operational responsibilities over foreign policy, and ultimately would not resolve the potential conflict between the agencies.

In its lead agency role, DOT depends largely on the accumulated expertise and experience of other involved Federal agencies to carry out its Presidential mandate. DOT would have to duplicate the expertise of affected agencies

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in order to issue a single Federal approval of a launch or launch site. The substantial lead time necessary for this duplication would seriously delay the approval of commercial launch applications and the implementation of the President's initiatives. To respond quickly to the needs of the emerging ELV industry, continued reliance on the expertise and decision-making authority of other agencies is essential.

The most important streamlining step has already been taken: the designation of DOT as the lead agency to facilitate and encourage commercial space operations under Executive Order 12465. Under the Executive Order, DOT has the authority to coordinate the efforts of other agencies and their regulations in the commercialization of space. Under Executive Order 12465, all involved agencies are required to form an interagency group and to review and revise their regulations and procedures to remove unnecessary obstacles to the development of commercial ELVs.

It is uncertain whether an early compilation of requirements would present a stifling regulatory situation. In order to effectively coordinate and streamline the review process, DOT will need to work with other appropriate agencies to assess the regulatory requirements involved. From this compilation of requirements, DOT, in consultation with other involved agencies, can thoroughly review the present regulatory framework and adequately determine which areas need streamlining or present duplication. DOT supports the use of cooperative working arrangements and executive forums, such as the interagency group as providing the most appropriate method for effectively reviewing and streamlining regulations and procedures affecting the commercialization of ELVs.

Also, in order to expedite the licensing process, DOT has been discussing the potential transfer of ITAR authority over commercial launch vehicles and spacecraft from the State Department to the DOT. This proposed transfer is discussed in greater detail under Questions 4 & 5 of these additional questions.

As a result of the Executive Order, signed a little over a month ago, DOT has established an Office of Commercial Space Transportation, housed within the Office of the Secretary. This Office is currently undertaking a thorough and systematic review and analysis of existing government policies, regulations and procedures with a view towards streamlining the current licensing process. As this detailed review progresses, this Office will inform the Committee of its findings.

At this early stage in the development of the ELV industry, an all-encompassing legislative proposal may result in unforeseen or unintended consequences. DOT has discovered the problems to be "process-oriented", with the technical issues being more straightforward and easier to address. The accumulated expertise and experience within the government can resolve the technical issues, providing a workable and streamlined system for responding to license requests. After gaining further experience with this new industry, DOT will be able to identify those actual problems that may require legislative remedy. The Committee's oversight will continue and any serious difficulties which may develop would furnish a sufficient predicate for moving to consider legislation.

QUESTION 9:

The bill calls for development of a single license application for Once an application is filed, DOT would distribute the application appropriate agencies for their review. A final decision to issue o deny a license would be based on the recommendation of those agenci

a. What is DOT's assessment of the workability of this process Woul the licensing process be expedited by this procedure? Why or Why not

b. Who should have the final decision authority with respect to the issuance or denial of a license?

c. If final decision authority is decentralized in the government, what problems can be expected? How would appeals be made and under what authority? Who would monitor for compliance and under what authority? Who and how would licenses be enforced and under what authority?

RESPONSE:

Our efforts will be toward consolidating license applications to the extent possible. There are many opportunities for streamlining the licensing process although it not appear that a single application for all approvals will be necessary.

We have identified two key launch approval requests that can be consolidated, i.e., the Export License application of the State Department and the airspace clearance requirement of the Federal Aviation Administration. These two Federal approvals are directly related to the launch event and the information required in the past by these agencies has been similar.

Consolidating the license application for these two Federal approvals would simplify the applicants task. Both FAA and the State Department would continue to perform their reviews regardless whether one consolidated, or two separate, applications were used. We are also discussing with the Department of State the possibility of shifting the International Traffic in Arms Regulations (ITAR) license approvals to DOT.

Final decision authority for the issuance or denial of a given license should rest with the statutorily responsible Federal agency, such as the Federal Communications Commission for radio frequencies, or the Federal Aviation Administration for airspace clearance.

DOT does not believe that it would be practical for one agency, such as DOT, to have authority to unilaterally reverse another agency's

decision. The Department of Transportation should not overrule a DOD decision that directly and legitimately related to national security. Instead, however, the Department can effectively act as an ombudsman and honest broker to insure that Federal decisions are reasonable, timely and based on thorough examination of all the options.

We do not think that decentralization within the government poses a problem to the commercial launch industry. The process which currently exists for the launch industry is similar to that of other transportation industries. For example, aviation is the responsibility of the Federal Aviation Administration, yet NASA, the Departments of State and Commerce, Export-Import Bank, and Civil Aeronautics Board also have key roles regarding the approval or disapproval of various aspects of aviation activities.

(For DOT's response to the monitoring and enforcement questions, see response to question 2.)

QUESTION 10. The draft bill requires private launch operators to secure liability insurance in amounts specified by DOT.

a. Is this requirement necessary and, if so, why?

b. How will DOT determine the level of insurance that will be required by private launch operators to cover third-party liability?

c. If the maximum available private insurance does not satisfy established requirements, how would DOT respond? Would DOT (or the U.S. Government) assume responsibility for the excess liability coverage just as NASA does for payloads launched on the Shuttle?

RESPONSE: DOT believes that the public interest requires third-party liability insurance for commercial launch operators in order to ensure that the U.S. Government's international obligations are met properly.

There are two methods that can be utilized to determine the appropriate level of insurance. One approach is to require the user to purchase the maximum amount of such insurance which is available commercially at reasonable rates. NASA has utilized this method for setting the level of insurance for payloads on the Shuttle at $500 million per payload.

The second approach is based upon traditional risk analysis. Under this approach, DOT would perform technical risk analysis to determine the risk associated with that type of launch vehicle and then set insurance levels commensurate with that risk.

Because of the complexity of the issue, DOT s studying carefully both approaches to determine what particular approach or combination of approaches would be appropriate. DOT recognizes the importance of this issue to the industry, and is closely examining potential methods for resolving this problem.

QUESTION 11:

Can you describe the staffing and expertise that currently exists in your Office of Commercial Space Transportation?

a. Does the number of staff comprise the full complement, or do you anticipate expansion?

b. Can you describe the activities of your office since its creation?

c. What proportion of your office's time has been engaged in providing "one-stop shopping" to Starstruck, Inc., in seeking a license for launching?

RESPONSE:

Currently, the Office has a staff of 15, who are serving on detail from other organizations in the Department. We plan to establish permanent positions to support this effort, and have reflected six positions for this purpose in the FY 1985 estimates. We are assessing the activity level of the office and until this is defined sufficiently to justify further adjustments, the Office will continue to be supplemented as necessary by staff detailed from other offices.

Since the creation of the Office, we have done the following:

(1) met with representatives from the industry to learn firsthand of their experiences and plans, views of the ELV market, the successes and difficulties they have experienced, and the role they believe the Department can play in helping them to commercialize ELVs;

(2) met with other Federal agencies to discuss their respective roles in the commercialization of ELVs, the streamlining of regulations, and the development of a licensing process;

(3) reviewed the existing regulations which are being applied to commercial ELV activity;

(4) facilitated the application and approval process for the Starstruck launch;

(5) conducted a preliminary assessment of the viability of the ELV industry and potential market;

(6) represented the Secretary at several national space conferences to discuss the Department's new lead role and the plans to encourage the commercial ELV industry;

(7) assessed the potential effects of Government charges for the use of national ranges;

(8) discussed with the Department of State the possible transfer of State's International Tariff and Arms Review ELV-related responsibilities to DOT;

(9) provided staff support for the Department's new membership on the Senior Interagency Group (Space);

(10)established appropriate contacts with the industry, media, interest groups, and professional organizations to improve understanding of the issues and enhance the Department's sensitivity to their concerns.

We estimate that the staff time used by the office in helping Starstruck make its way through the Federal licensing process equates to one-half of a staff year.

QUESITON 12:

Can you describe the membership and activities of the interagency group? What is its representation?

RESPONSE:

The Interagency Advisory Committee established by Executive Order is chaired by the Secretary of Transportation and will consist of senior level representatives from the following agencies:

- The Department of Commerce;
- The Department of State;
- The Department of Defense;
- National Aeronautics and Space Administration;
- Federal Communicartions Commission; and,
- other agencies, as deemed appropriate by the Secretary.

The Interagency Committee will meet at the call of the Secretary (approximately four times a year) to advise and assist the Department in performing its lead agency responsibilities as provided in the Executive Order.

In particular, each member of the Commitee will help to:

1. Define each agency's respective role in the commercialization of expendable launch vehicles;

2. Determine the contribution they can make to encourage and facilitate the commercialization of ELVs;

3. Indentify issues which need to be addressed by the Government foster commercial ELV activities;

4. Suggest what specific actions should be taken by respective Federal agencies to help commercialize ELVs.

5. Review proposed streamlining initiatives with respect to regulations affecting ELVs; and,

6. Advise the Secretary on the licensing application and approval process.

QUESTION 13:

What exactly is the industry advisory panel that you refer to in your testimony supposed to do?

RESPONSE:

The panel will advise us on its view of the future of the commercial ELV industry, the barriers to achieving a healthy and viable industry, current policies and programs that have an impact on the commercial ELV industry, and the effectiveness of DOT's efforts to stimulate private sector investment in commercial, unmanned space boosters.

The panel will be established in accordance with the Federal Advisory Committee Act and will not be a policy-making body. It will, however:

- o undertake information-gathering activities to define issues for consideration by the panel, develop positions on these issues, and communicate the panel's position to the Secretary.

- o evaluate economic, technological and institutional developments relating to commercial space transportation and communicate to the Secretary recommendations on promising new ideas and approaches for Federal policies and programs.

- o serve as a forum for the discussion of problems involving the relationship between industry activities and government requirements and seek, where possible, to resolve such problems without resorting to formal Departmental intervention.

QUESTION 14: What do you envision the role of your office to be if in fact a serious launch incident occurred involving significant property damage or loss of life?

RESPONSE: Public safety is the primary concern of the existing and future regulatory structure affecting the commercial space industry. DOT would take necessary steps in advance of a launch to minimize the risk of a serious launch incident.

After the issuance of a license, Government personnel would continue to monitor the launch activities of a licensee to ensure that adequate safety precautions have been taken for the protection of the public. For example, launch vehicles are required to have an automatic destruct mechanism that would be activated in the event that a launch vehicle should depart from its clear "safety corridor."

Launches conducted from national ranges, such as Cape Canaveral, would be subject to existing range safety standards. These ranges have impeccable safety records. The development of commercial range standards would reflect a commitment to attaining similar safety achievement. DOT is currently working with representatives from the Air Force, FAA, and NASA concerning range safety standards that would apply to commercial ranges.

QUESTION 15:

What do you see as the future of the commercial ELV industry?

RESPONSE:

We are very optimistic about the future of the commercial ELV industry particularly in the long-term (1988-1995). We are concerned, however, about the uncertain near-term market for that segment which is serviced by Atlas and Titan type booster rockets.

We see a future commercial ELV industry that will strengthen the U.S. position in space transportation services by providing options for all customers, both foreign and domestic. The proven technology and high reliability of existing U.S. ELVs, as well as the many entrepreneurial ELV endeavors being undertaken, further add to our optimism over the future of the commercial ELV industry in the United States.

QUESTION 16:

How competitive can the U.S. ELV industry be with Ariane?

RESPONSE:

A viable commercial U.S. ELV industry with proven technology and high reliability would provide direct competition with other expendable systems. Competition between commercial U.S. and foreign ELVs will provide commercial customers a choice among comparable capabilities. In addition, such competition will stimulate ongoing improvements to U.S. ELVs which will serve to strengthen U.S. leadership in space transportation technology.

Certainly, the current subsidies included in Ariane's and the Space Shuttle's prices create a competitive problem for commercial U.S. ELVs in the near-term (1984-1988). The Atlas and Titan booster rockets provide capability to compete with the developing Ariane 4 series. These boosters, however, are in the most tenuous near-term market situation, due to Ariane pricing policies. To maintain a viable commercial ELV industry, capable of competing with Ariane, the Atlas and/or Titan must be able to capture enough market demand to sustain at least a nominal business base in the near-term.

MINORITY QUESTIONS
Hearing on Draft ELV Commercialization Legislation
March 29, 1984

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QUESTION 2:

Please explain how DOT plans to promote commercial ELV operations under the Executive Order. How does DOT envision its role in planning and policy formulation as it relates to ELVs?

RESPONSE:

DOT intends to continue working with the Departments of Commerce and State, the U.S. Trade Representative, and NASA in Organization for Economic Cooperation and Development (OECD)efforts to develop policies and agreements regarding international trade in space products and services. An OECD ministerial meeting in May will discuss the issue in the context of international trade in high-technology goods, including telecommunications, robotics, pharmaceuticals, machine tools, and microelectronics, as well as space products and services. In addition, DOT intends to work with Commerce, State, USTR and NASA in OECD's study of international trade in space products and services proposed for next year.

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DOT has begun to review Federal statutes, treaties, regulations, and policies which may have significant impacts on ELV commercialization efforts. DOT will obtain advice from its industry advisory group and interagency group on these matters. The Department will identify those Federal statutes, treaties, regulations, and policies which may have adverse impacts on ELV commercialization efforts. DOT will recommend appropriate changes to affected agencies and, as appropriate, to the President.

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How competitive can the U.S. ELV industry be with Ariane?

RESPONSE:

A viable commercial U.S. ELV industry with proven technology and high reliability would provide direct competition with other expendable systems. Competition between commercial U.S. and foreign ELVs will provide commercial customers a choice among comparable capabilities. In addition, such competition will stimulate ongoing improvements to U.S. ELVs which will serve to strengthen U.S. leadership in space transportation technology.

Certainly, the current subsidies included in Ariane's and the Space Shuttle's prices create a competitive problem for commercial U.S. ELVs in the near-term (1984-1988). The Atlas and Titan booster rockets provide capability to compete with the developing Ariane 4 series. These boosters, however, are in the most tenuous near-term market situation, due to Ariane pricing policies. To maintain a viable commercial ELV industry, capable of competing with Ariane, the Atlas and/or Titan must be able to capture enough market demand to sustain at least a nominal business base in the near-term.

QUESTION 4:

What are the strengths of the Executive Orde: and what actions are you taking to implement its provisions?

RESPONSE:

The President's signing of Executive Order 12465 has created a positive environment for the development of a private commercial ELV industry, including:

(1) The assignment by the President of a single agency to assist the industry in gaining federal approvals has brought a new weight and significance to our efforts to expedite licensing and approval processes by the involved agencies;

(2) The Order directs agencies to establish expeditious timetables for responding to applications, and to review their regulations and procedures to eliminate obstacles and unessential requirements;

(3) The Order constitutes an interagency group which has official status to act as a forum to fulfill the purposes of the E.O., most notably the elimination of unneeded and duplicative regulatory requirements;

(4) The lead agency does not supplant the authority of agencies with traditional jurisdiction over regulatory and other substantive matters, thereby avoiding the time-consuming and costly process of duplicating the expertise of these agencies and engaging in protracted confrontations over interpretations in their traditional areas of expertise;

(5) The lead agency is assigned a promotional role for the industry as well as a facilitative role.

The Department is pursuing numerous activities to implement the new Executive Order. DOT has created an Office of Commercial Space Transportation which has been actively engaged in assisting one launch company (Starstruck) obtain government clearance for its first launch. This experience has enabled DOT to identify problems in the approval process and begin the streamlining of the process in a systematic way. The Office is creating an advisory committee with membership from manufacturers, the financial and insurance communities, professional associations, academia, and the public. A systematic review of current government procedures and policies is under way with the objective of streamlining the licensing process.

DOT and the Department of State are discussing the potential for shifting approvals for launch vehicles and payloads now handled by the State Department through the "ITAR" process to DOT in its role as lead agency. The International Traffic in Arms Regulations have been used

to regulate commercial ELV space launches and ensure their compliance with foreign policy and national security requirements.

The Department is working with the Departments of State and Commerce, the U.S. Trade Representative, and the National Aeronautics and Space Administration (NASA) to develop policies to increase the competitiveness of American commercial ELV's in the world market. We are participating with the Commerce Department in preparing policy papers for upcoming meetings of the OECD (Organization for Economic Cooperation and Development), aimed at improving the position of the United States in these markets.

The Department is working with the range safety specialists from the Air Force to review existing facilties and procedures and to identify actions needed to ensure that commercial ranges and ELV's will experience the same high level of safety as achieved on the national ranges. We are also working with the Defense Department and NASA in formulating pricing structures for use of government-owned launch range facilities and services by commercial customers, in order to establish a full-cost recovery policy for commercial and foreign shuttle flight operations.

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QUESTION 5:

What is your relationship with the other federal agencies involved in the ELV area?

RESPONSE:

We have been working very closely with each of the principal Federal agencies involved in commercializing ELVs, namely, the Departments of State, Commerce, and Defense; the Federal Communications Commission; and, the National Aeronautics and Space Administration. In addition, we have been working closely internally with the Department's organizations which are involved in the ELV launch process, i.e., the Federal Aviation Administration, the U.S. Coast Guard, and the Materials Transportation Bureau. Items of discussion have included: the promotion of ELVs (Commerce); the pricing policy and procedures for use of the national ranges (DOD and NASA); the possible transfer of the ELV-related aspects of the ITAR process (State); technical assistance (DOD and NASA); telecommunications requirements (Commerce and the FCC); the potential development of commercial ranges (FAA, DOD and NASA); the transport of hazardous materials (MTB); the clearance of shipping lanes (USCG); international trade issues (Commerce); and, national security concerns (DOD et al).

We anticipate that the meetings of the Interagency Advisory Committee, which is chaired by the Secretary, will serve as an important forum for advising and assisting the Department in performing its lead agency responsibilities. We plan to continue regular meetings with the agencies listed above as well as others to increase understanding and active Government partnership in fostering and encouraging the commercialization of the Nation's ELVs.

QUESTION 6:

Do you view ELVs as complementary or competitive with the shuttle?

RESPONSE:

ELVs will provide a complementary capability to the Shuttle. They will enable those customers who prefer the convenience and relative simplicity of ELVs, or the need for certain types of orbits, to utilize U.S. capability, as opposed to foreign ELV offerings.

QUESTION 7:

Has your presence made any difference for the one applicant so far?

RESPONSE:

DOT's presence as lead agency has had a significant impact on the processing and approval of the proposed Starstruck launch. Our presence has been most beneficial in two important respects: (1) in establishing a priority within the government to expedite the review process, and (2) to organize government efforts to resolve problems when difficulties arise. Our presence may have shortened the time required to obtain Starstruck's license by perhaps as much as a couple of months.

In a number of instances, Starstruck experienced difficulties that DOT's presence helped resolve. When Starstruck faced problems with regulations at the local government level, our official in the Office of the Secretary was able to enlist the support of the United States Coast Guard and Materials Transportation Bureau (both agencies of DOT) to help alleviate local officials' concerns. When Starstruck needed a new launch location, we were able to work with FAA and the Department of Defense to find suitable, safe locations.

QUESTION 8:

How does the Department plan to protect public safety and insure national security requirements on national and commercial ranges?

RESPONSE:

Protection of public safety and national security is the keystone of the existing and future space launch licensing process. It is clear, based our extensive discussions with the space industry leaders, that the private sector shares this interest.

All commercial launches require government approval, and we will ensure through the review process that national security and foreign policy concerns are addressed.

With respect to safety, launches initiated from national ranges, such as Cape Canaveral or Vandenburg, will be subject to existing range safety standards. These ranges have an impeccable safety record. We will take into consideration the national range safety standards as the commercial range safety standards are developed with a goal of similar safety achievement.

QUESTION 9:

How does the Department plan to establish liability insurance requirements?

RESPONSE:

There are two methods that can be utilized to determine the appropriate level of insurance. One approach is to require the user to purchase the maximum amount of such insurance available commercially at reasonable rates. NASA has utilized this method for setting the level of insurance for payloads on the Shuttle at $500 million per payload.

The second approach is based upon traditional risk analysis. Under this approach, DOT would perform technical risk analysis to determine the risk associated with that type of launch vechicle and then set insurance levels commensurate with that risk.

Because of the complexity of the issue, DOT is studying carefully both approaches to determine what particular approach or combination of approaches would be most appropriate. DOT recognizes the importance of this issue, and is closely examining potential methods for resolving any problems that might arise in this area.

QUESTION 10:

How will the Department indemnify above the amount of the required level?

QUESTION 11:

Should the government be the "insuror of last resort"?

DOT does not have authority to indenmify for losses beyond the limit of insurance. We recognize the importance of the entire insurance issue and are examining potential method for resolving it. With respect to personal and property damage to foreign entities from, inter alia, ELV launches from U.S. territory the United States will fulfill its obligation to assume liability for such damage under the Outer Space Liability Convention.

QUESITON 12:

Can you describe the membership and activities of the interagency group? What is its representation?

RESPONSE:

The Interagency Advisory Committee established by Executive Order is chaired by the Secretary of Transportation and will consist of senior level representatives from the following agencies:

- The Department of Commerce;
- The Department of State;
- The Department of Defense;
- National Aeronautics and Space Administration;
- Federal Communicartions Commission; and,
- other agencies, as deemed appropriate by the Secretary.

The Interagency Committee will meet at the call of the Secretary (approximately four times a year) to advise and assist the Department in performing its lead agency responsibilities as provided in the Executive Order.

In particular, each member of the Commitee will help to:

1. Define each agency's respective role in the commercialization of expendable launch vehicles;

2. Determine the contribution they can make to encourage and facilitate the commercialization of ELVs;

3. Indentify issues which need to be addressed by the Government foster commercial ELV activities;

4. Suggest what specific actions should be taken by respective Federal agencies to help commercialize ELVs.

5. Review proposed streamlining initiatives with respect to regulations affecting ELVs; and,

6. Advise the Secretary on the licensing application and approval process.

APPENDIX II

ADDITIONAL STATEMENT SUBMITTED FOR THE RECORD

AMERICAN SPACE FOUNDATION
214 MASSACHUSETTS AVE., N.E. •SUITE 420
WASHINGTON, D.C. 20002
202/546-4474

April 6, 1984

Rep. Harold Volkmer
2465 Rayburn HOB
Washington, D.C. 20515

Dear Rep. Volkmer:

Enclosed for your information is a copy of the testimony submitted by the American Space Foundation concerning H.R. 3942, the Expendable Launch Vehicle Commercialization Act.

I would be pleased to discuss our thoughts on this matter with you or your staff at any time. In the meantime, if I can provide any further information, please don't hesitate to call.

Sincerely,

Fred Whiting

Fred Whiting
Executive Director

FW/pc
enclosure

STATEMENT OF
THE AMERICAN SPACE FOUNDATION
to the
SPACE SCIENCE AND APPLICATIONS SUBCOMMITTEE
of the
HOUSE COMMITTEE ON SCIENCE AND TECHNOLOGY

The American Space Foundation (ASF), a non-profit organization with approximately 20,000 members, and the nation's largest grassroots pro-space lobby, endorses the concepts embodied in the Expendable Launch Vehicle Commercialization Act (H.R. 3942).

ASF realizes the vast potential for commercialization of space and its benefits to the U.S. economy. Because privately-financed ELV launches are an inherently risky business, ASF believes that government regulation should be streamlined so as to encourage private entrepreneurial space efforts.

As past experience illustrates, this reform is long overdue. One company, Space Services, Inc., had to obtain regulatory permissions, clearances and approvals from five different federal agencies and had to register with two others in order to receive clearance to launch a test flight - this at a cost of over $250,000 in fees over a period of six months. If the government is serious about ELV commercialization it must ease the regulatory burden and centralize the necessary requirements within the scope of a single federal agency. In addition, the lead agency's authority must be clearly defined.

ASF supports efforts to streamline the regulatory process by establishing a single point of contact within the federal government for applicants desiring permission to launch a space vehicle. Representative Akaka's initial bill, the Space Commerce Act (H.R. 1011), was a commendable attempt to reduce the amounts of time and money expended to meet the requirements of many different federal agencies.

ASF also recognizes the Administration's reasons for designating the Department of Transportation as the lead agency for private ELV activities. Action by DOT in creating the Office of Commercial Space Transportation shows it is taking this project seriously. We believe the President's directive was necessary to meet the immediate need for a "one stop shopping" capability.

We are aware of the Administration's concerns about legislative action at this time, because of the need for a flexible approach to this totally new area of government regulation; we are also cognizant of objections voiced by the industry, particularly Starstruck, Inc., to specific aspects of the bill. We also recognize the need to codify a mutually acceptable approach to ELV commercialization, so that industry will have clearly defined guidelines for future action. Certainly this issue, which offers so many potential benefits to the national economy, should be addressed by the Congress of the United States. Congress must recognize that it has oversight authority in this area and must send a clear signal to industry that it supports ELV commercialization. Industry has a part to play too, and must inform the Congress of its needs and requirements so that a satisfactory solution can be achieved.

Therefore, the American Space Foundation urges members of the Subcommittee on Space Science and Applications to direct the Department of Transportation to undertake a study of ELV commercialization policy which will address the concerns of industry and establish procedures which will give the Department the flexibility it needs. As members of the Subcommittee may know, such a study is currently being conducted by the National Chamber Foundation, an affiliate of the U.S. Chamber of Commerce. A full report of the Space Enterprise Project and a legislative proposal are scheduled for release in June. These findings should be carefully evaluated by DOT, as they may prove invaluable in formulating a national space commercialization policy.

ASF appreciates having the opportunity to submit its views on H.R. 3942 to the Subcommittee on Space Science and Applications to be part of the record of testimony.

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